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Pa1 



SERVICE MANUAL

Pa1X specifications

Keyboard	61 weighted keys with Velocity and Aftertouch
SOUND DATA	
Tone Generator	HI Synthesis - 62 Voices, 62 Oscillators - Filters with Resonance
Multitimbral-Parts	Internal: 40 channels - Midi: 16 channels
ROM Sounds	780 (incl. Stereo Piano and GM2 sounds) + 48 Drum Kits
RAM Sounds	256 Sounds - 64 Drum Kits
Digital Drawbars	8 Footages - Realtime control using the 8 Assignable Sliders
Sound Edit	On-board full editing for Sounds and DrumKits
Sampling	Record, Edit, Time Slice (compatible with Korg, Wav, Aiff and AKAI)
PCM RAM Memory	16Mb – up to 32 Mb with Optional 16Mb standard Simm
PCM ROM Expansion	2 slots available - up to 32 Mb (Up to 512 extra Sounds and 128 Drum Kit)
Effects	4 Stereo Master (90 effects) - TC Helicon for Vocal FX
Real Time Tracks	4 (Upper 1/2/3, Lower) - 4 Pads
Performances	320 User Programmable
STYLES DATA	
Flash ROM Styles	Up to 608 locations - Preloaded Styles: 360
User Styles	96 (user area, but all styles are re-writable)
Arranger Tracks	8
Style Edit	Record & Edit functions
Direct from Disk	288 locations for HD - 96 for FD
Patterns/Chord Variations	Up to 40 (new Fill3/Break and Intro3/Count In style elements)
Style Performance (STS)	608 x 4 (Real time tracks + Acc. tracks) all programmable
PCM Style Grooves	Using the internal PCM RAM memory
SEQUENCER	
XDS Double Sequencer	Separate controls for each Sequencer - Balance Slider
4 STS saved with the Song	In SongBook Mode
Direct from Disk	Two songs at the same time
Tracks	16 + 16
Sequencer Edit	Record & Edit functions
Backing Sequence	Real Time Record - Step Record & Edit
Lyrics/Chords	On-Screen (compatible with most popular formats)
Events Memory	approx. 200.000
MP3 Player	Single MP3 Player/Recorder (optional)
CD Audio Player	KORG CDRW-1 drive (optional – rewritable starting from O.S. Vers. 2.0)
OTHER FEATURES	
Voice Processor	Voice technology by TC Helicon: 4 Parts Harmony, Reverb, Delay, Compressor, Eq.
SongBook and SongList	Fully Programmable
Arabic Scale	Programmable
Pads	4 + Stop button
Compatibility	with Korg i-series: style file - with Pa60/80:Style,Perf.,Sound, Song files
Operating System	OPOS Multitasking System - Load while playing - Upgradable
Internal SSD Flash memory	16 Mb for O.S and all Resources
Floppy Disk	3.5" 2DD/2HD - Ms-Dos compatible
Hard Disk	Optional HD, ATA-IDE Interface – 2,5" (user installable)
Amplification	Bi-amp 2 x 35 W (Woofers) + 2 x 12 W (Tweeters) - Loudness - Fixed Eq
Speakers	4 Speakers (13 cm Woofer + Dome Tweeter) - 2 way - Bass Reflex Box

Pa1X specifications

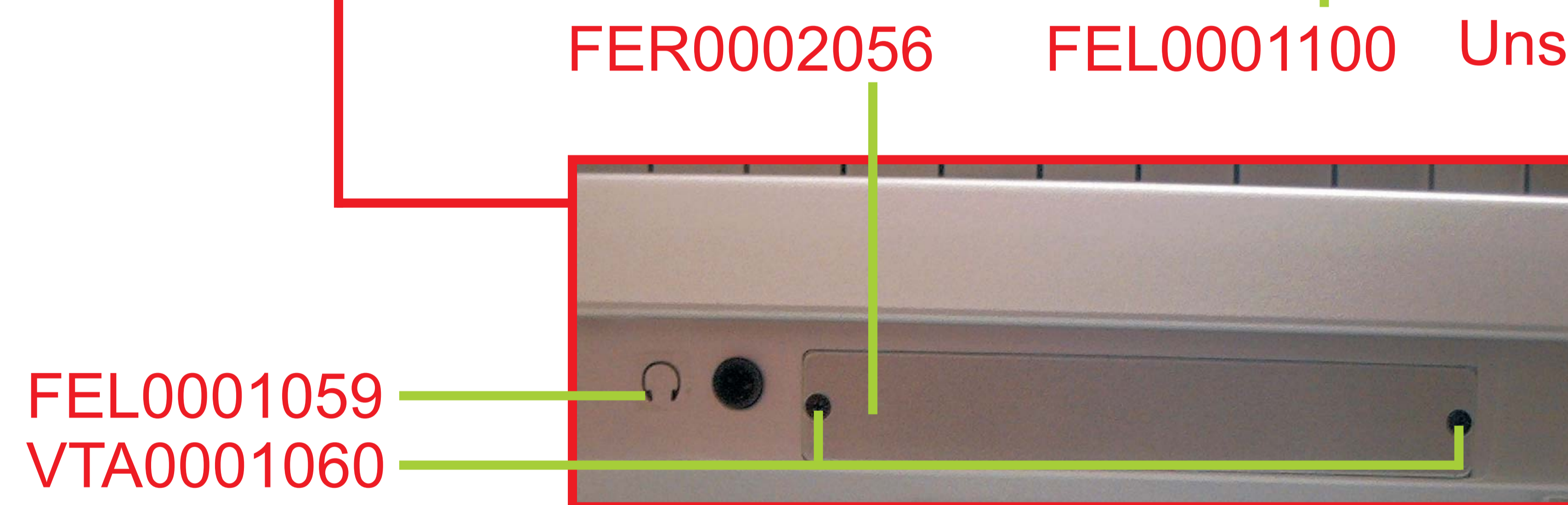
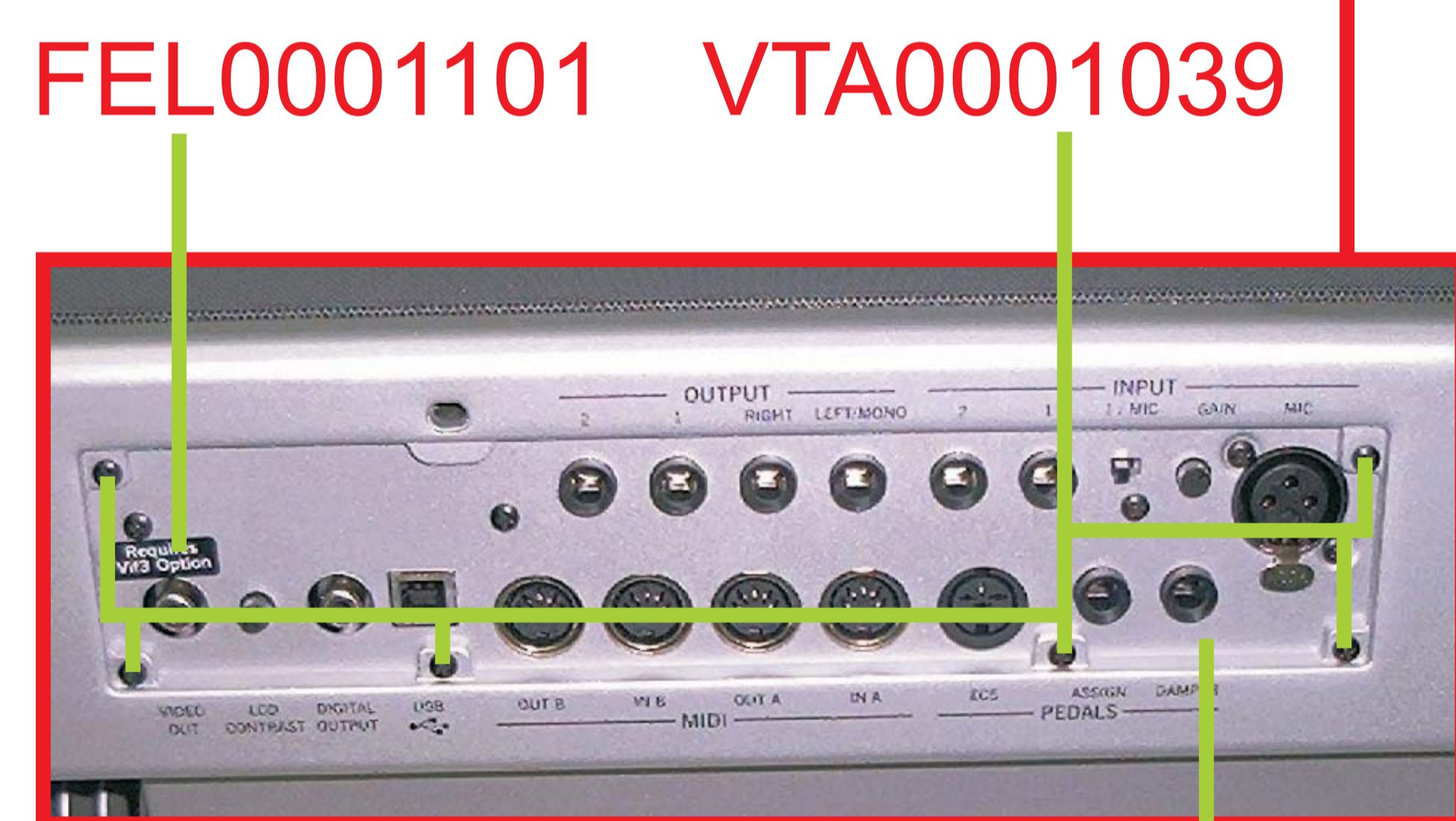
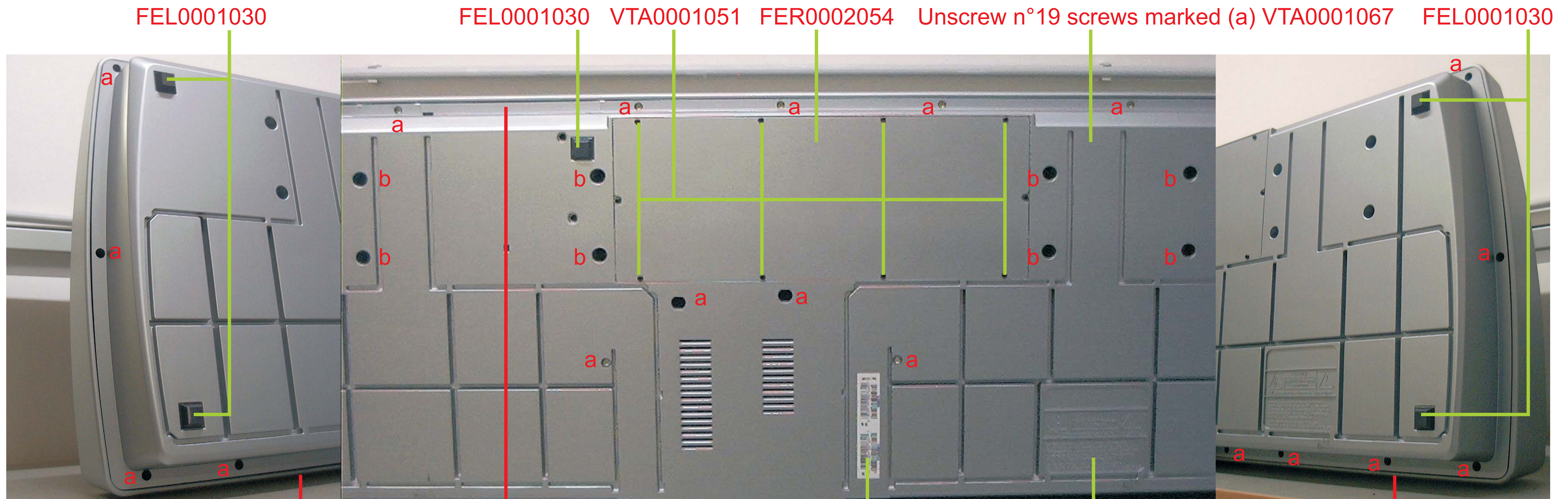
USER INTERFACE	
Display	240 x 320 Graphical Color Touch Screen Display
Controls	Joystick - Dial - Up/+, Down/-
Programmable Controls	4 Switches - 8 Sliders
Cursors	Master Volume - Acc/Seq Volume
Switches	Transp.-Memory-Bass Inv.-Man.Bass-Fade-Tap-Synchro-Ensemble
Help System	Hypertext - Contextual
CONNECTIONS	
MIDI	IN1 - OUT1 - IN2 - OUT2 (OUT 1/2 programmable as Thru)
USB	USB connector: Type B - Format: based on USB 1.1, for connecting to computer
Outputs	4 Analog (Left/Right/Out1/Out2) - S/PDIF coaxial Digital Output
Inputs	2 Line input-one switchable to Mic Balanced input (w/separate gain)
Headphone	1 (Front 6.3mm jack connection)
Pedals	1 Damper - 1 Assignable Footswitch/Pedal - EC 5
Power Supply	AC - Universal Voltage
OPTIONS	
Hard Disk	ATA-IDE Interface – 2,5" (user installable)
Voice Processor	SUG TC1 - TC Helicon "Pitch Correction / Voice Modeling" Upgrade
CD Audio Player	Korg CDRW-1 - CD Audio and CD ROM (rewritable starting from O.S. v. 2.0) (user installable)
CD Installation Kit	Korg CDRW1-IK Installation Kit for Korg CDRW-1
MP3 Board	EXBP-MP3 Player/Recorder board (user installable)
Video Interface	VIF3 NTSC/PAL board (user installable)
PCM RAM memory	72-pin SIMM (11-bit addressing) - supports one 16 MB part for a total of 32 MB RAM (user installable).
PCM ROM Expansion Board	2 slots available for Korg proprietary Expansion (user installable)
Expression/Volume Pedal	Korg EXP-2 - Korg XVP-10
Multi-Switch Pedal	Korg EC5
Damper Pedal	Korg DS-1H (supports half-pedaling)
Switch Pedal	Korg PS-1

a = n°11 PLA0001146
b = n°1 PLA0001136



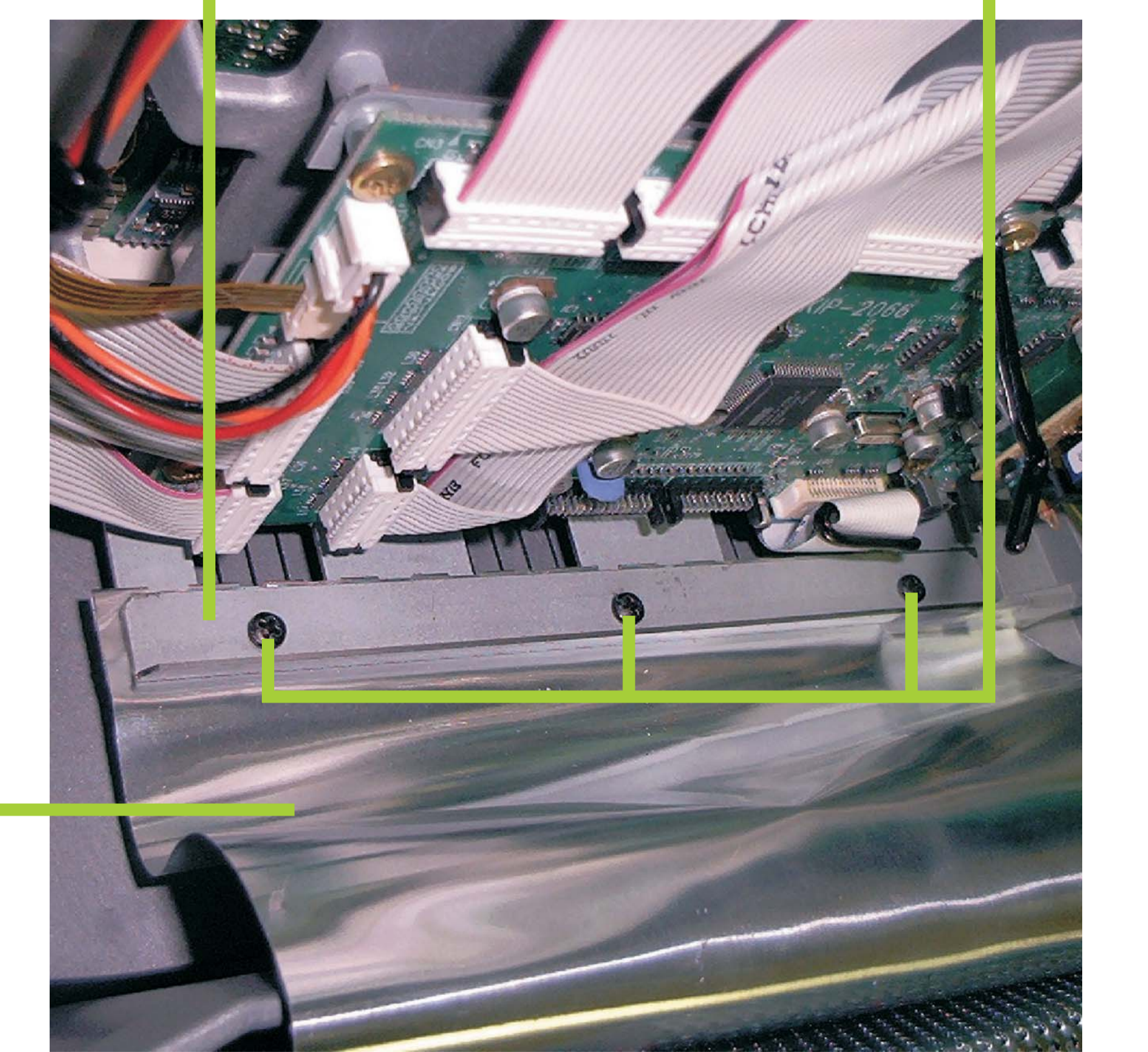
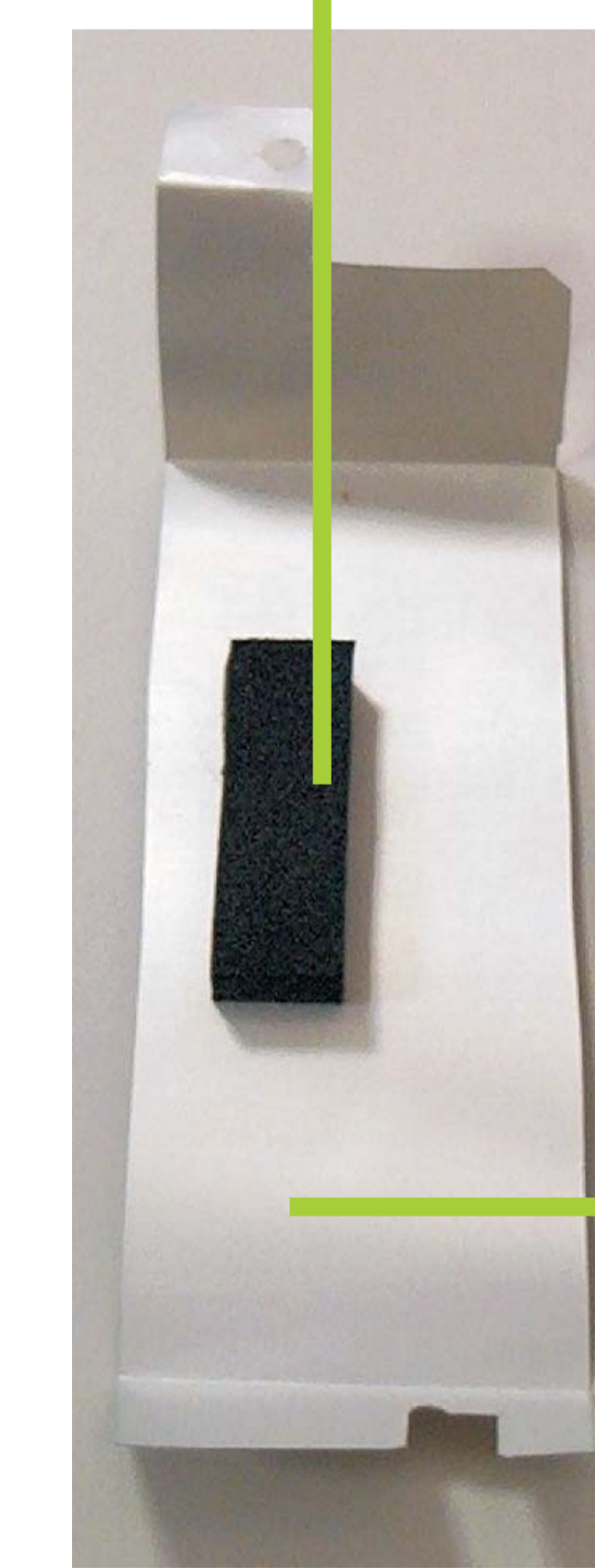
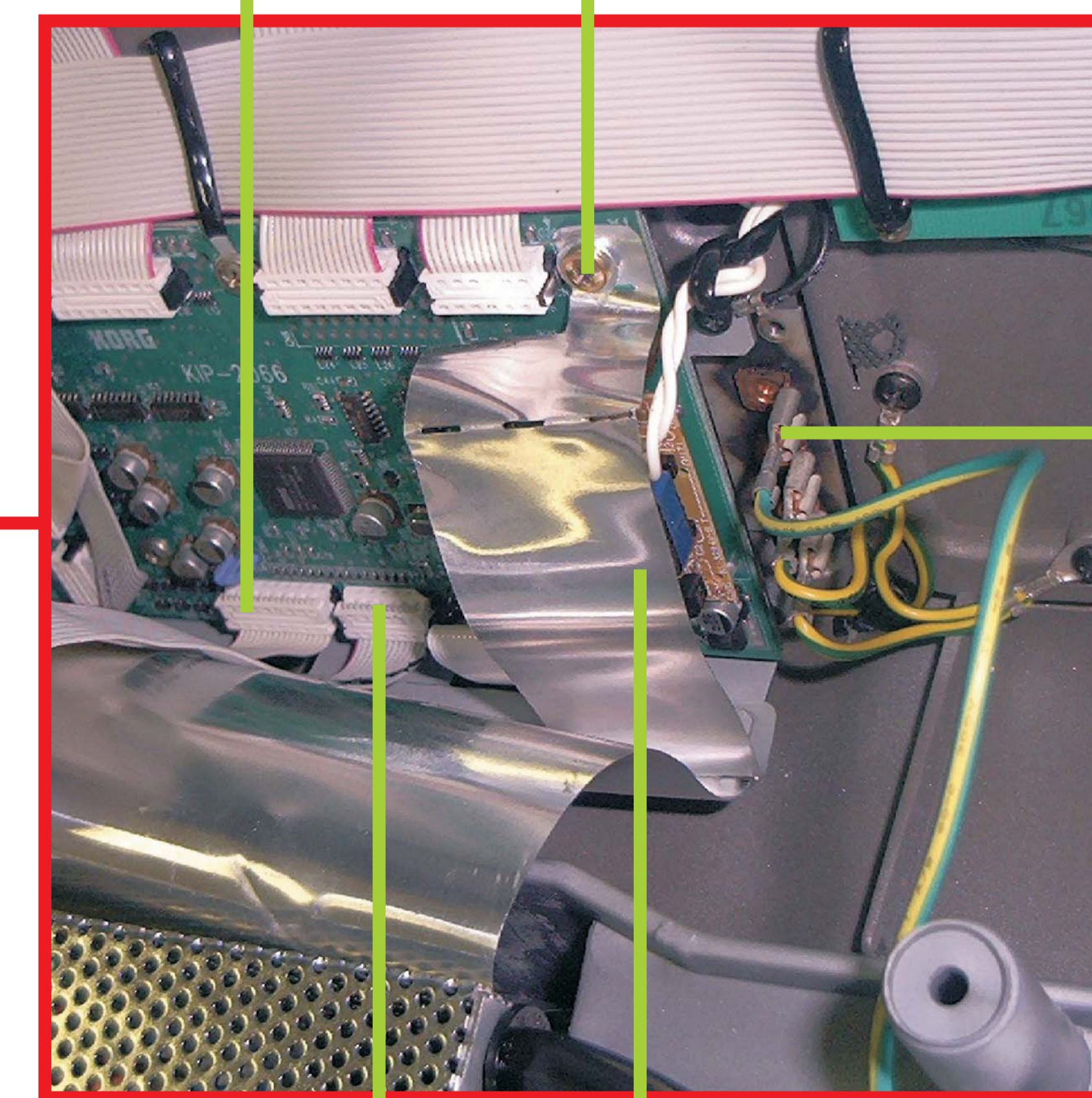
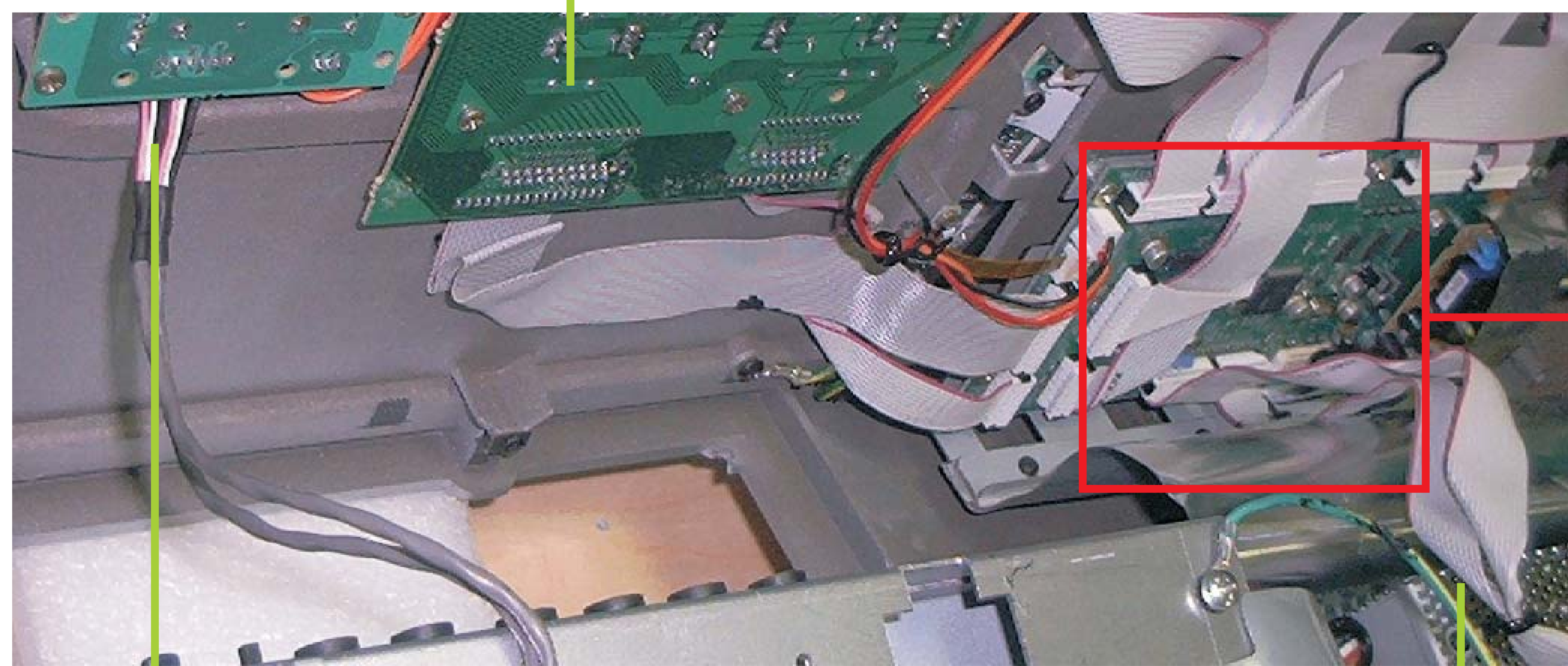
W = 428 mm (16.85 in)
H = 189 mm (7.4 in)
L = 1123 mm (44.2 in)
Weight = 22 Kg (48.5 lbs)

Full view



Upper case

RIL0001291 VTA0001010+VTA0001048 FEL0001040 FER0001216 VTA0001037



RIL0001182

Lower case

RIL0001290

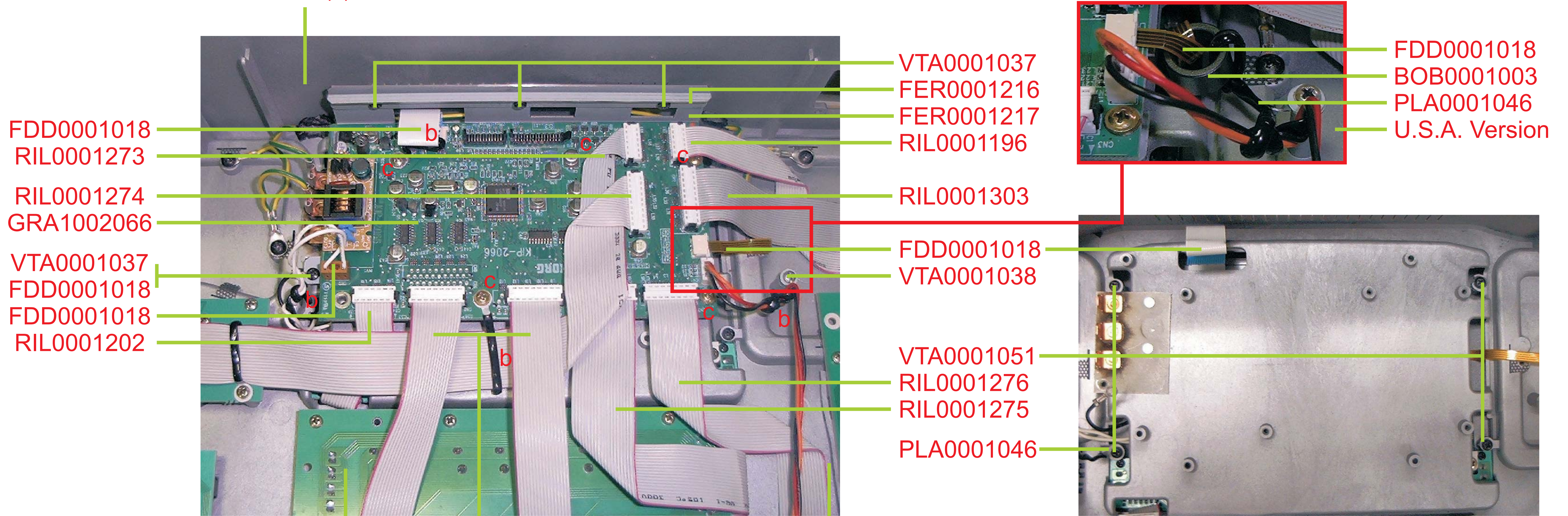
FEL0001110

RIL0001286

FEL0001110

Disassembly

Unscrew n°5 screws marked (c) VTA0001010



FDD0001018
RIL0001273
RIL0001274
GRA1002066
VTA0001037
FDD0001018
FDD0001018
RIL0001202

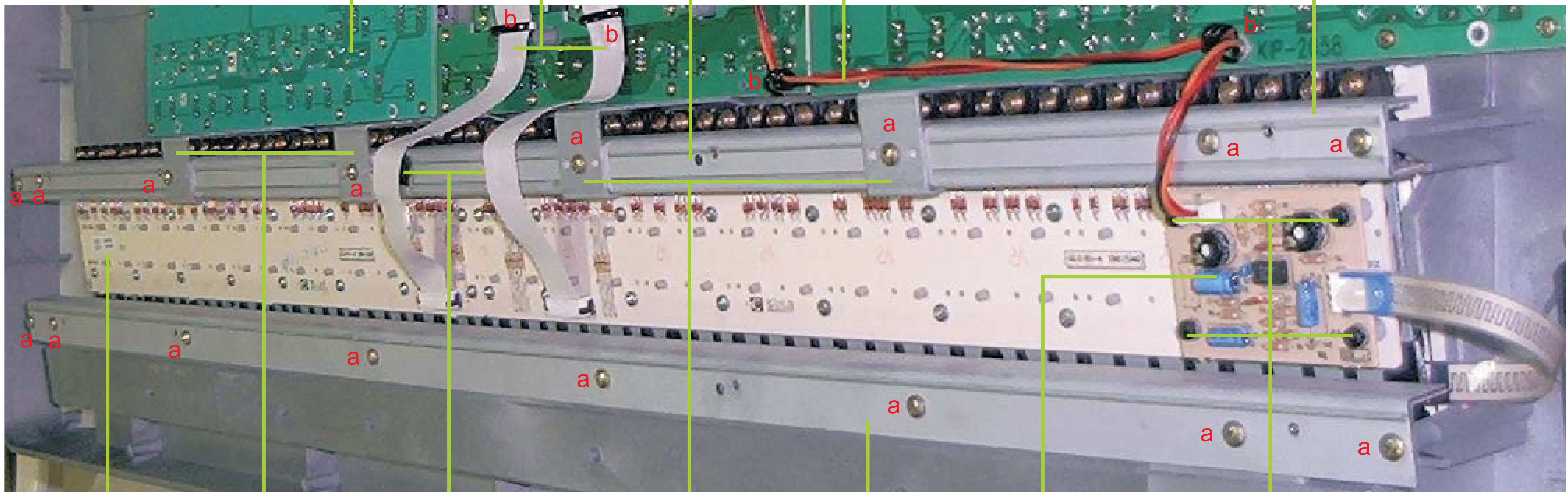
VTA0001037
FER0001216
FER0001217
RIL0001196

FDD0001018
BOB0001003
PLA0001046
U.S.A. Version

RIL0001303
FDD0001018
VTA0001038
VTA0001051
RIL0001276
RIL0001275
PLA0001046

Unlock n°8 cable ties (b) PLA0001046 RIL0001280 FER0001191 RIL0001277

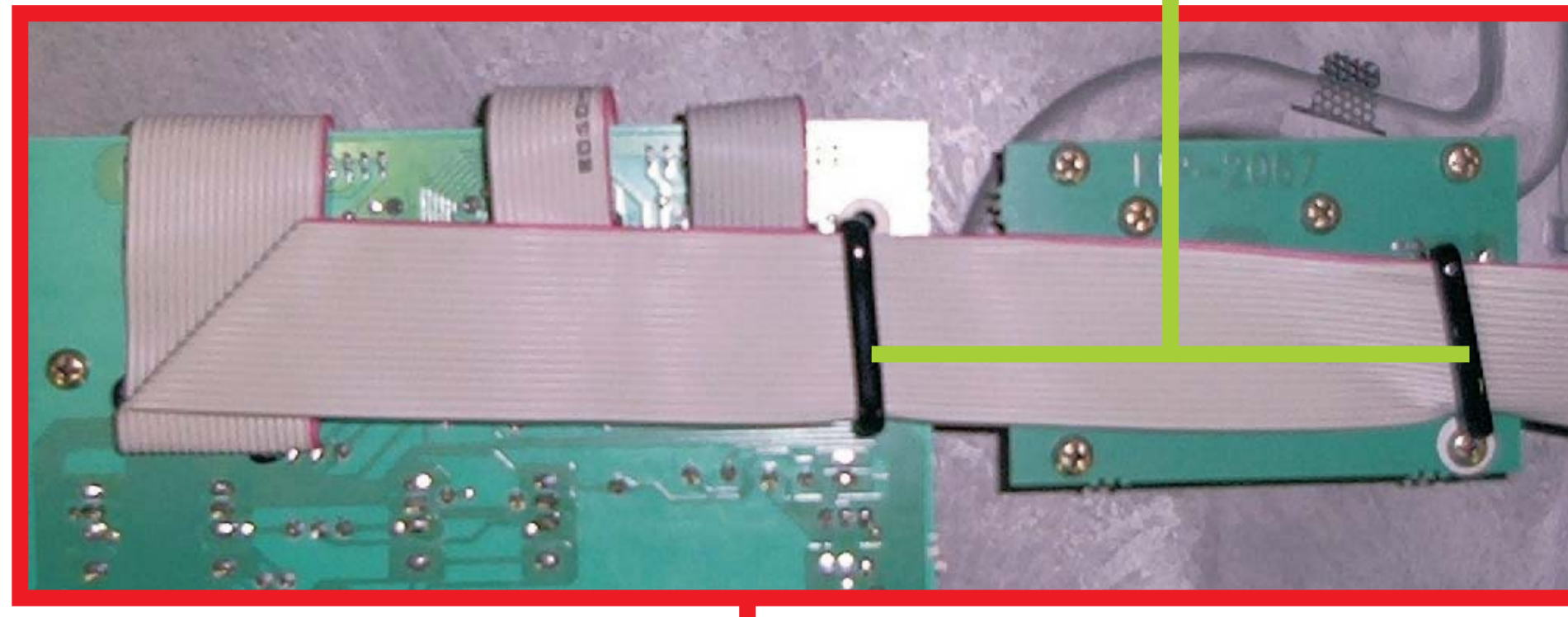
Unscrew n°16 screws marked (a) VTA0001067



TAS0001021 FER0001209 FEL0001103 FER0001209 FER0001192 GRA0002068 VTA0001016 + PLA0001094

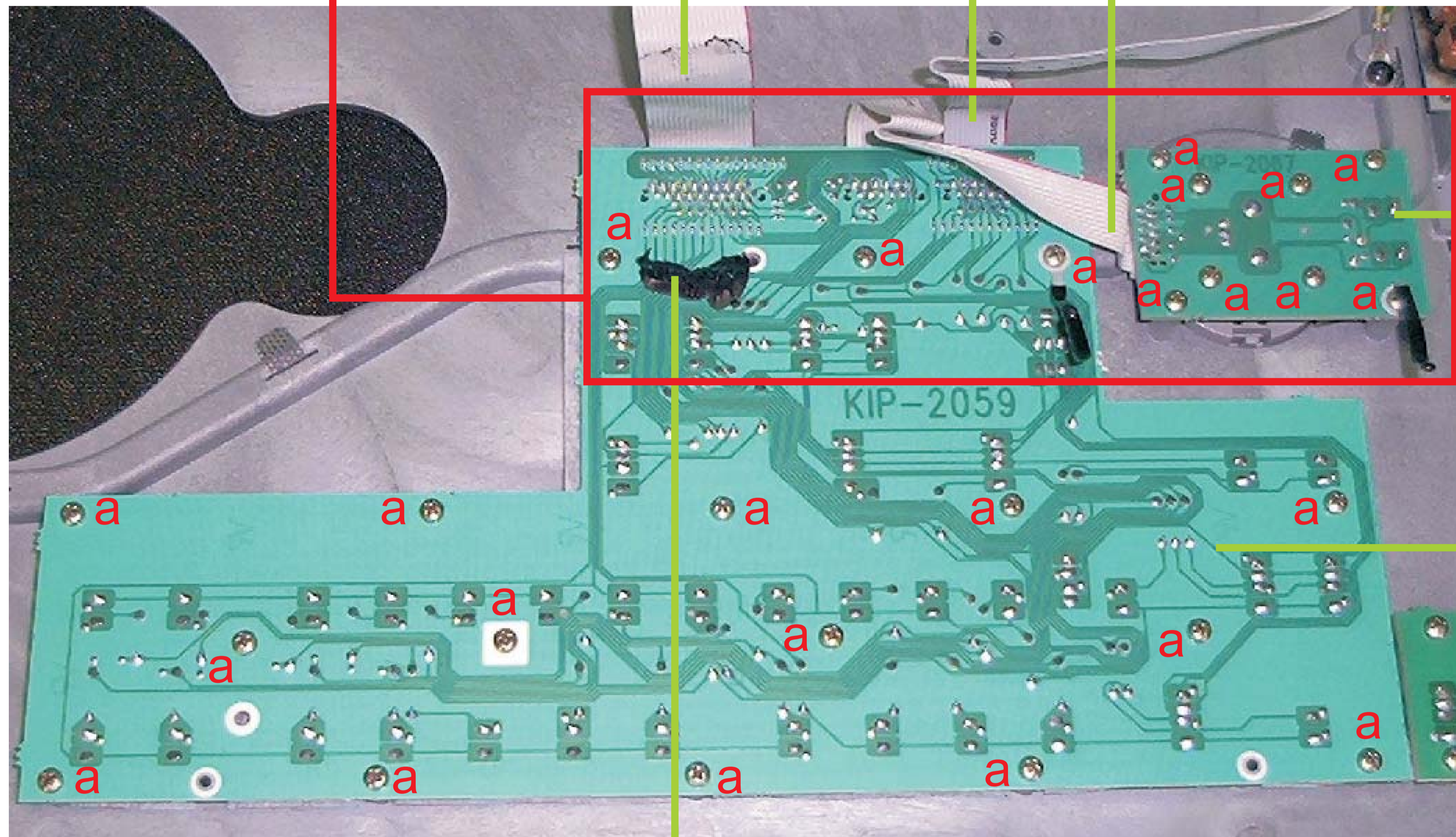
Upper case 1

PLA0001046



Unscrew n°68 screws marked (a) VTA0001038

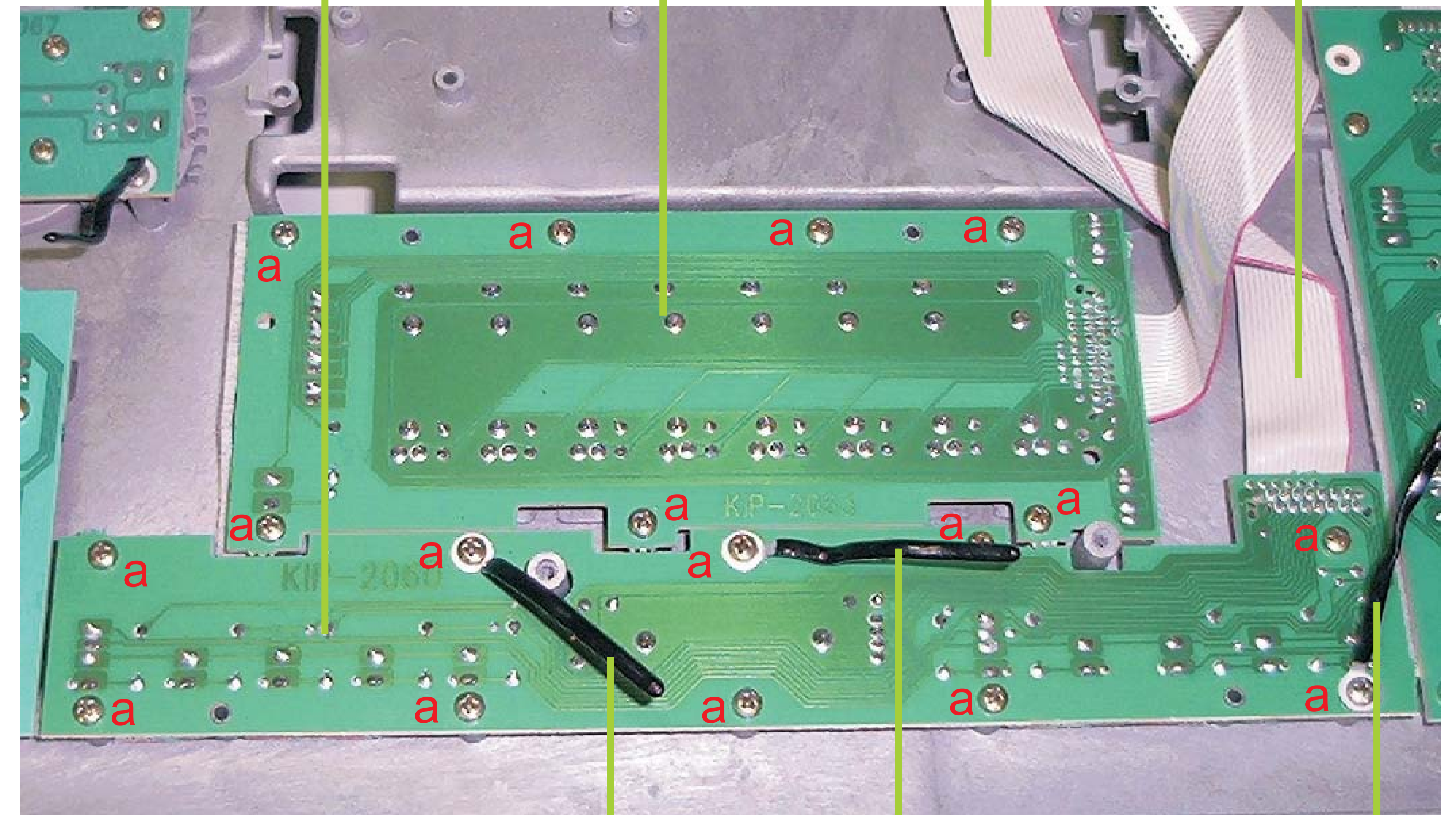
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GRA0002067

GRA0002059

GRA0002060 GRA0002063 RIL0001275 RIL0001276



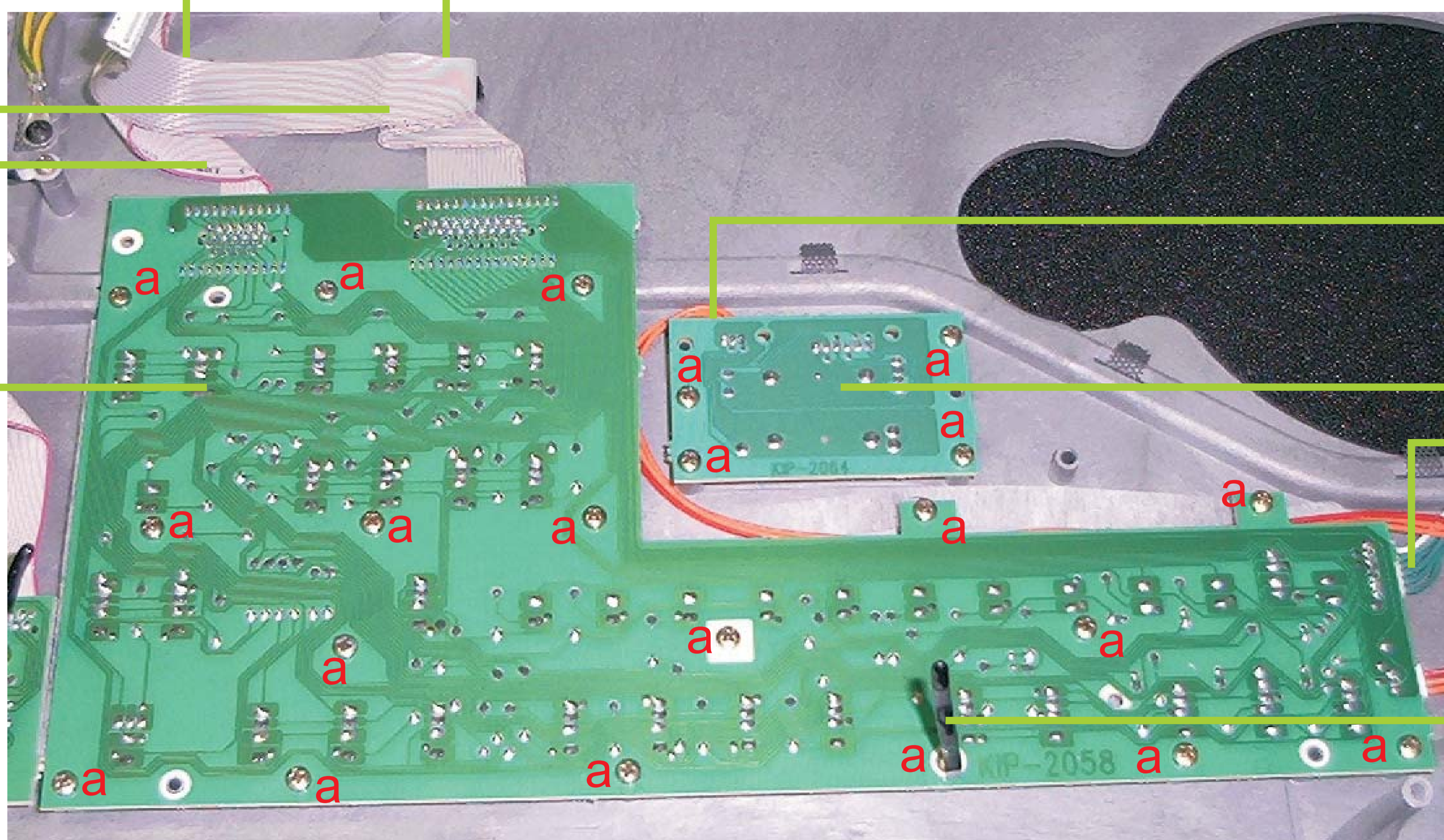
FEL0001103

FEL0001103

PLA0001046

RIL0001303
RIL0001196

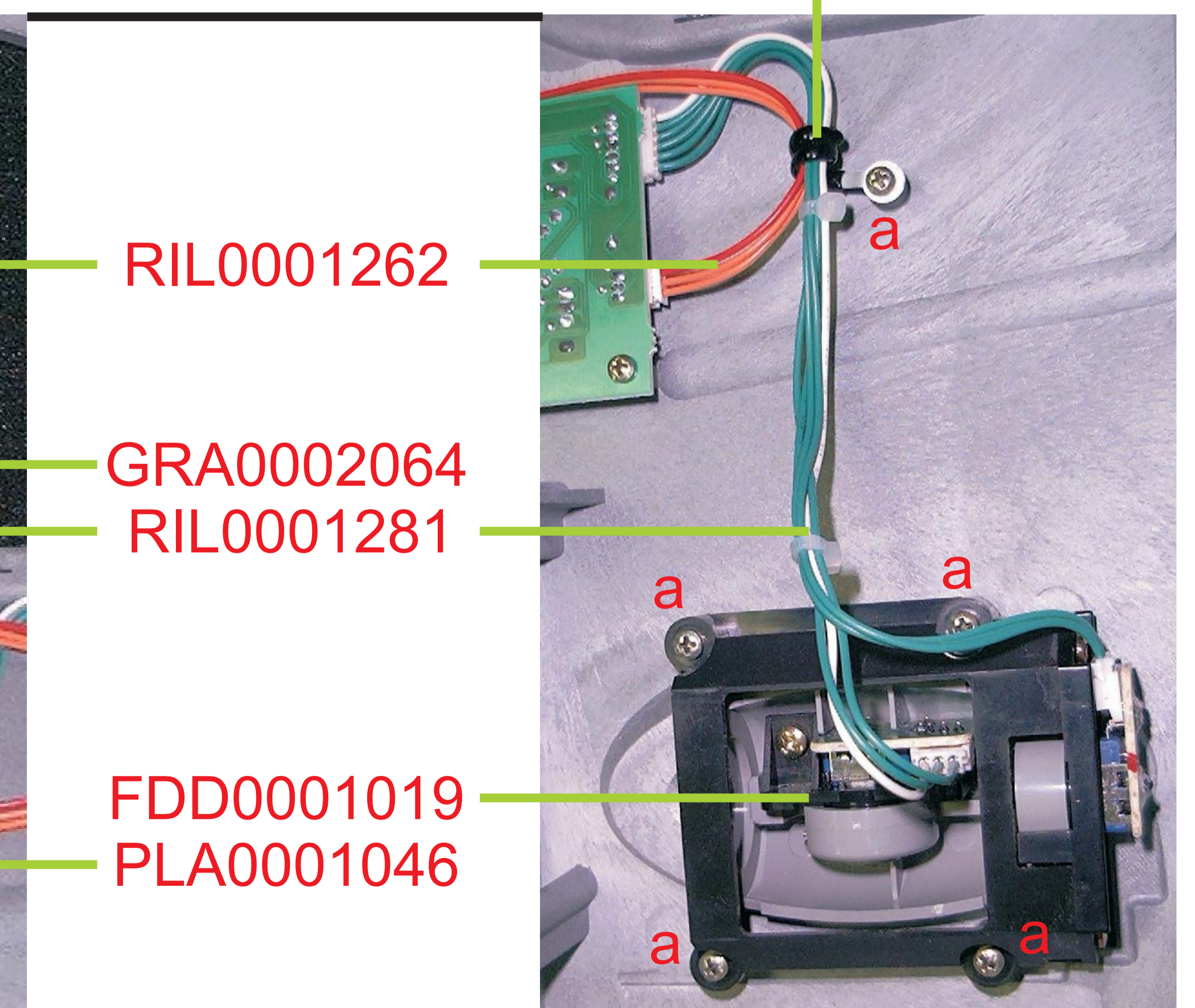
GRA0002058



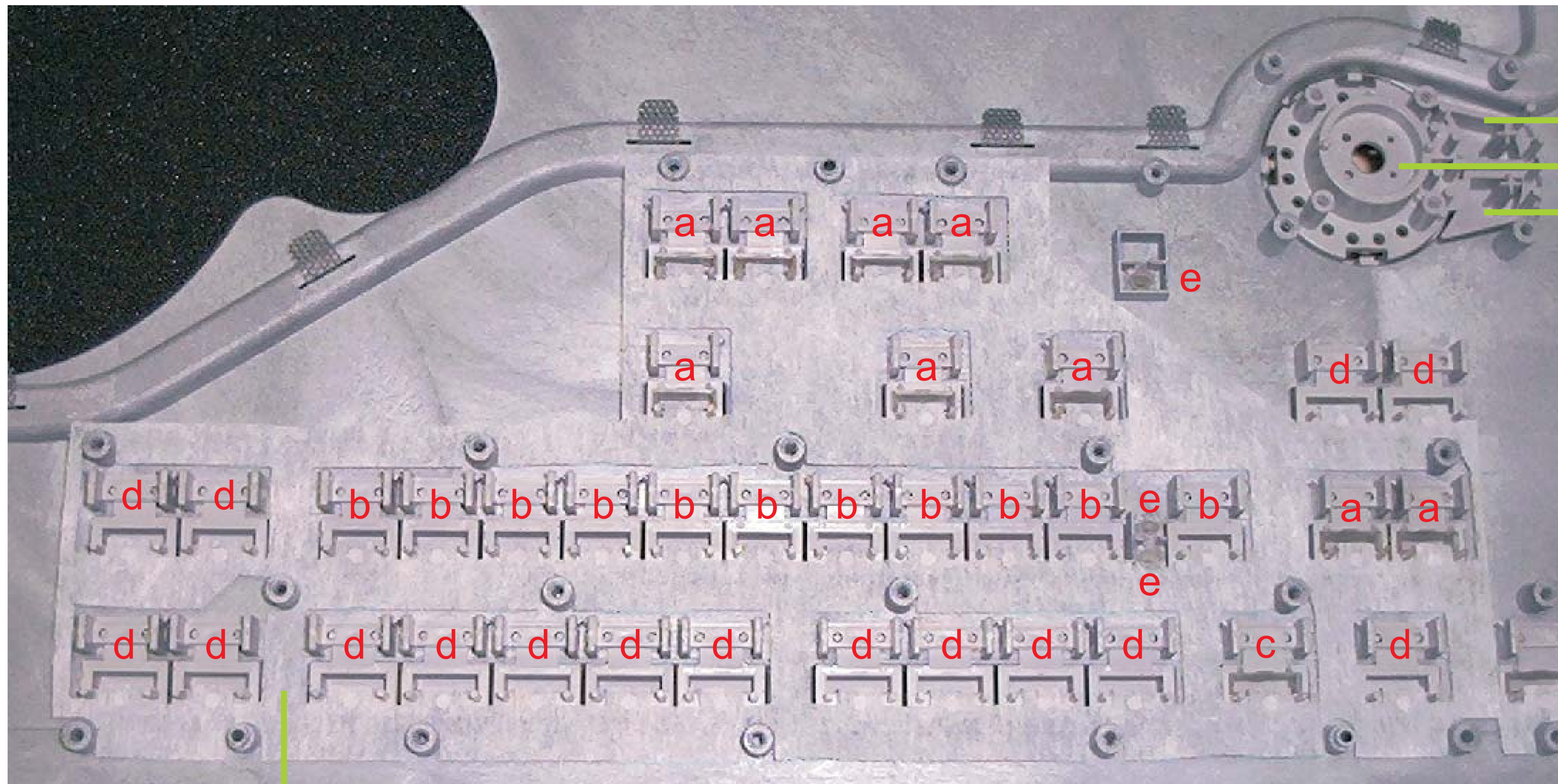
RIL0001262

GRA0002064
RIL0001281

FDD0001019
PLA0001046

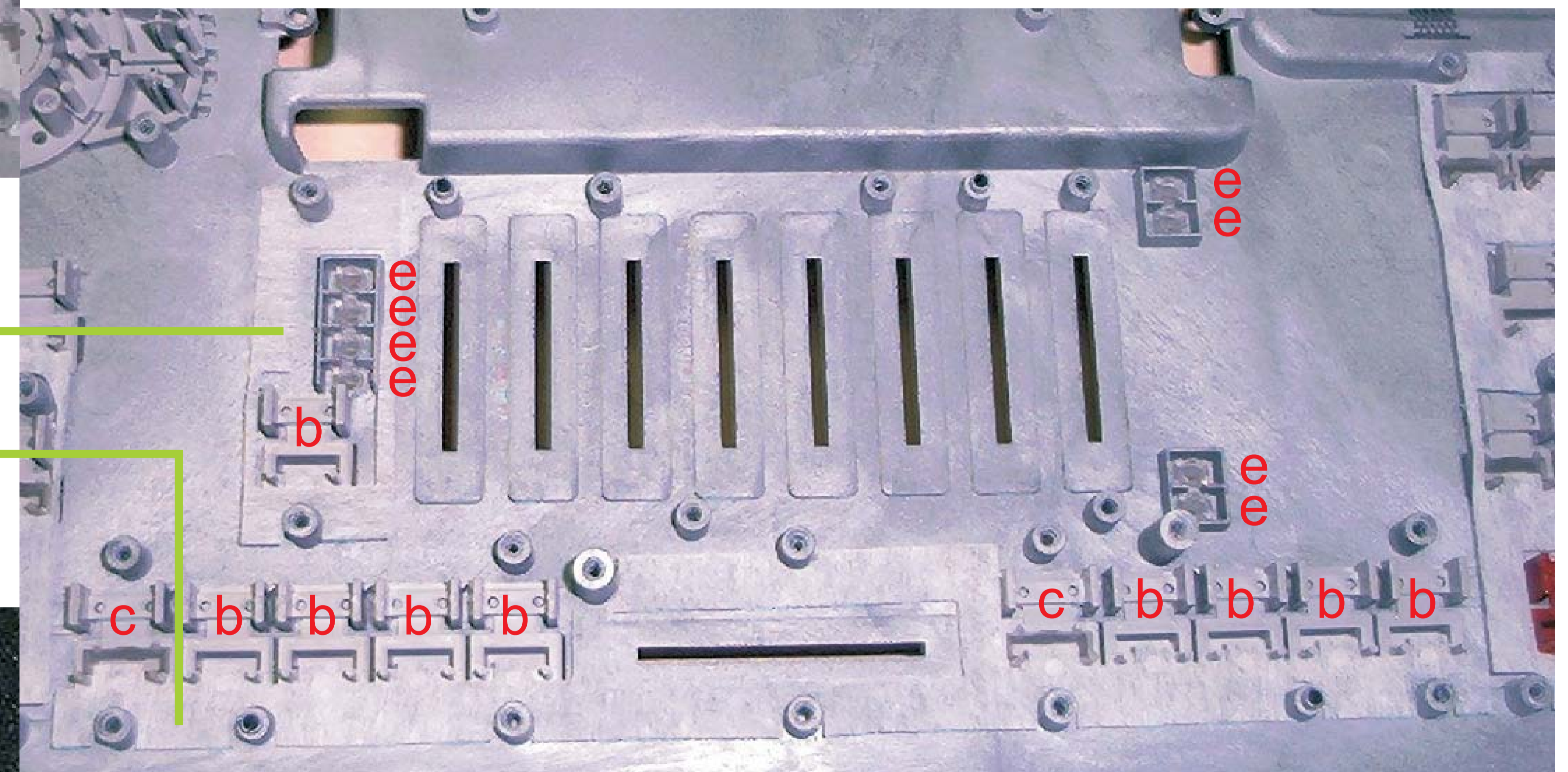


Upper case 2

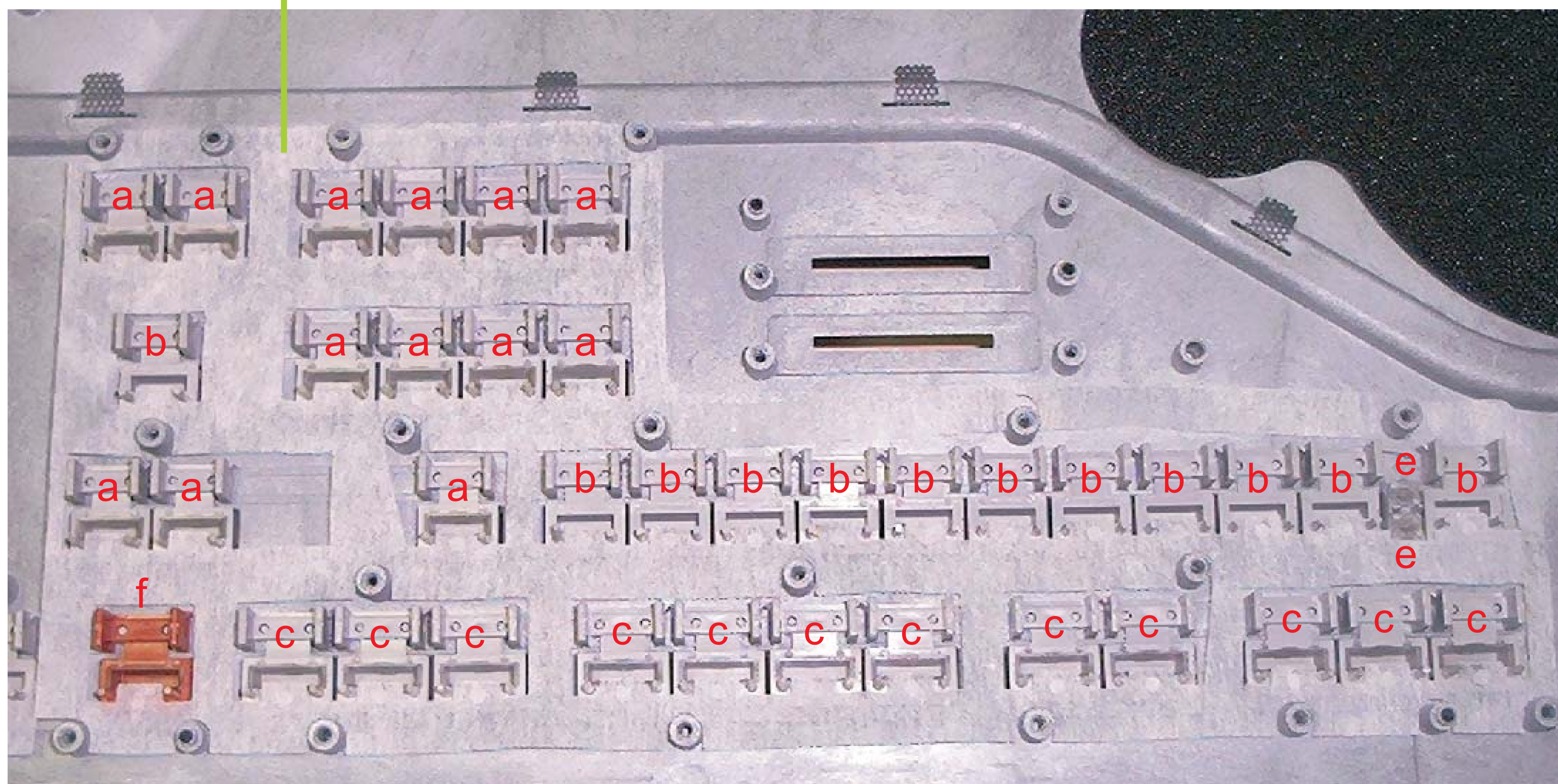


PLA0001134
 PLA0001133
 PLA0001135

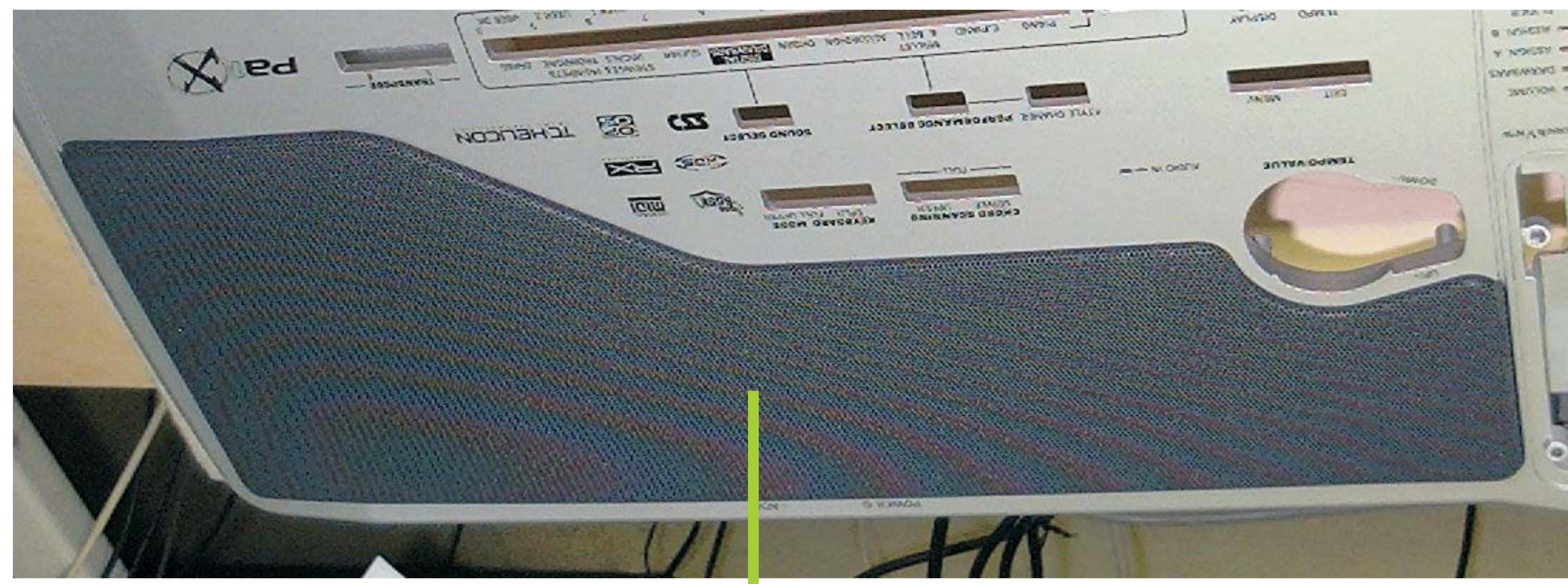
FEL0001104
 FEL0001105



FEL0001107
 FEL0001106



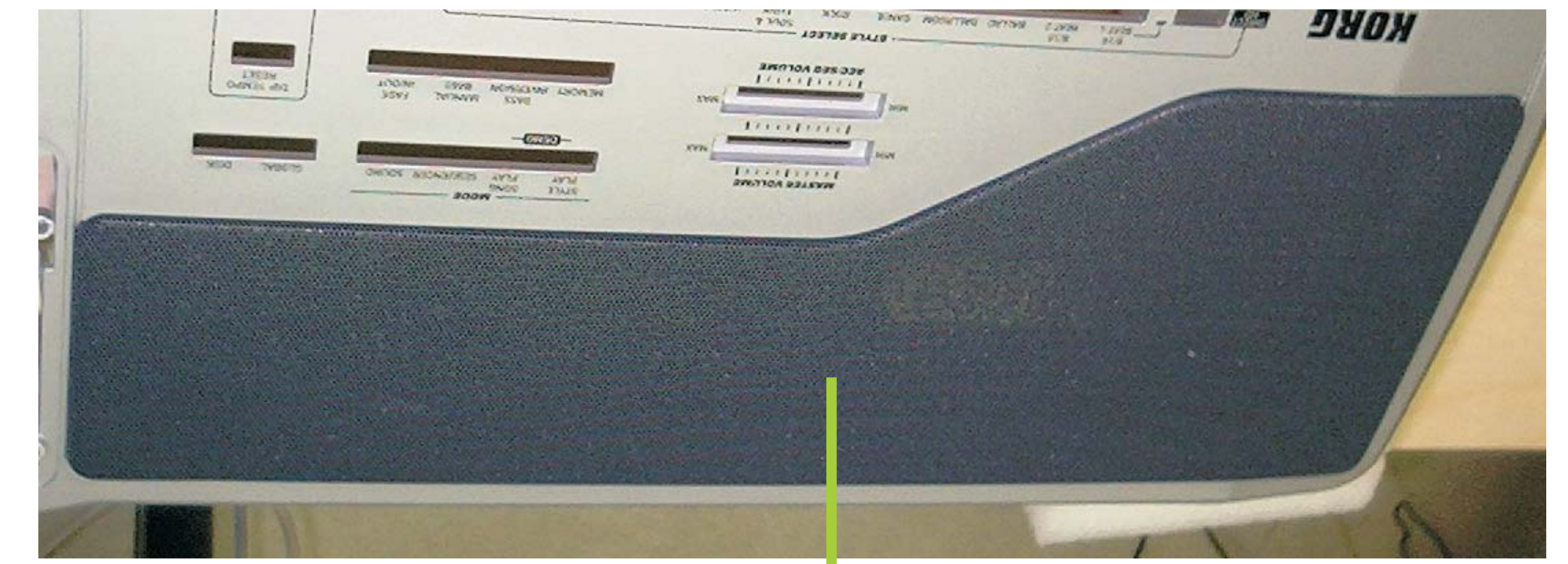
a = PLA0001139
 b = PLA0001140
 c = PLA0001141
 d = PLA0001142
 e = PLA0001144
 f = PLA0001148



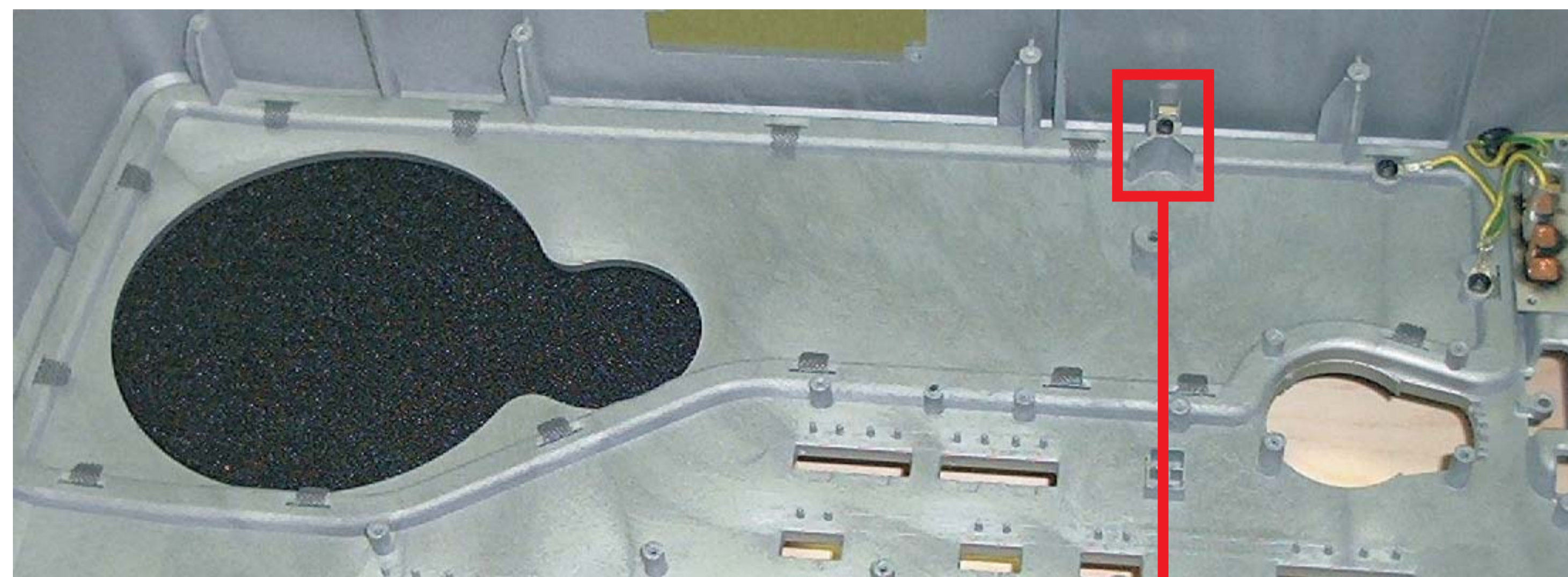
FER0001189



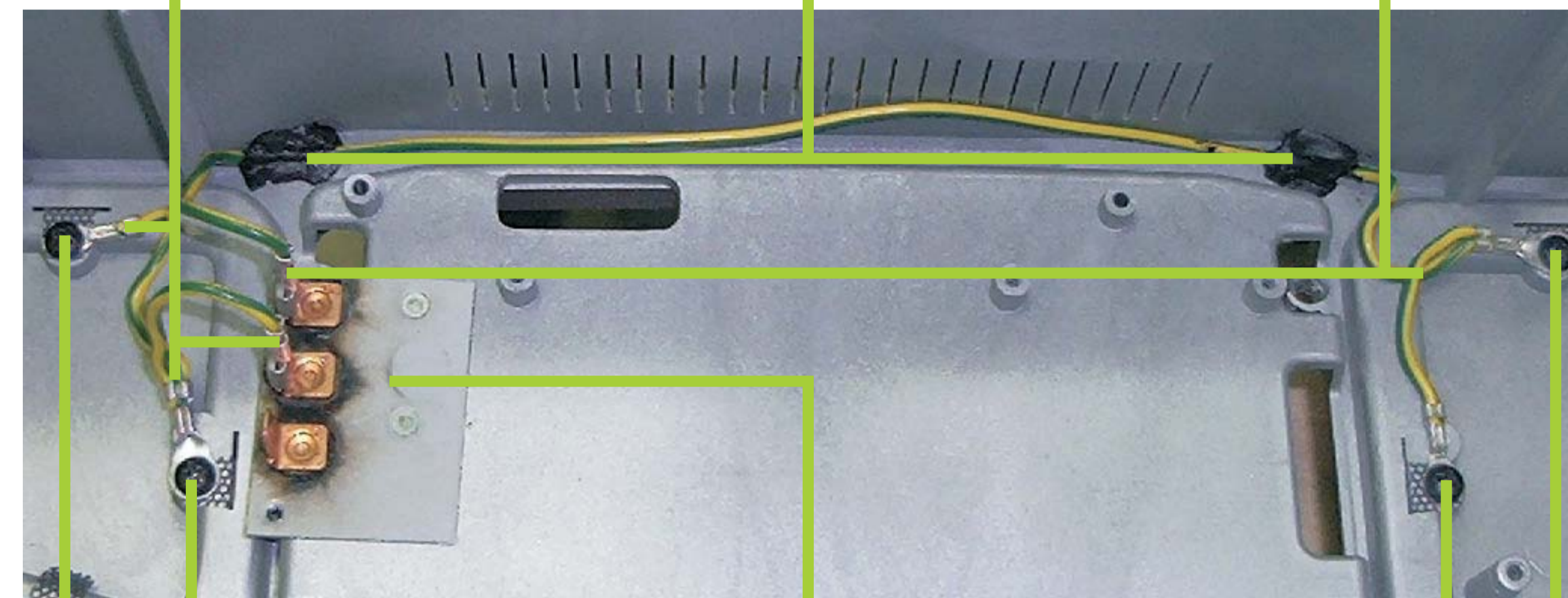
VTA0001023 + VTA0001048



FER0001190

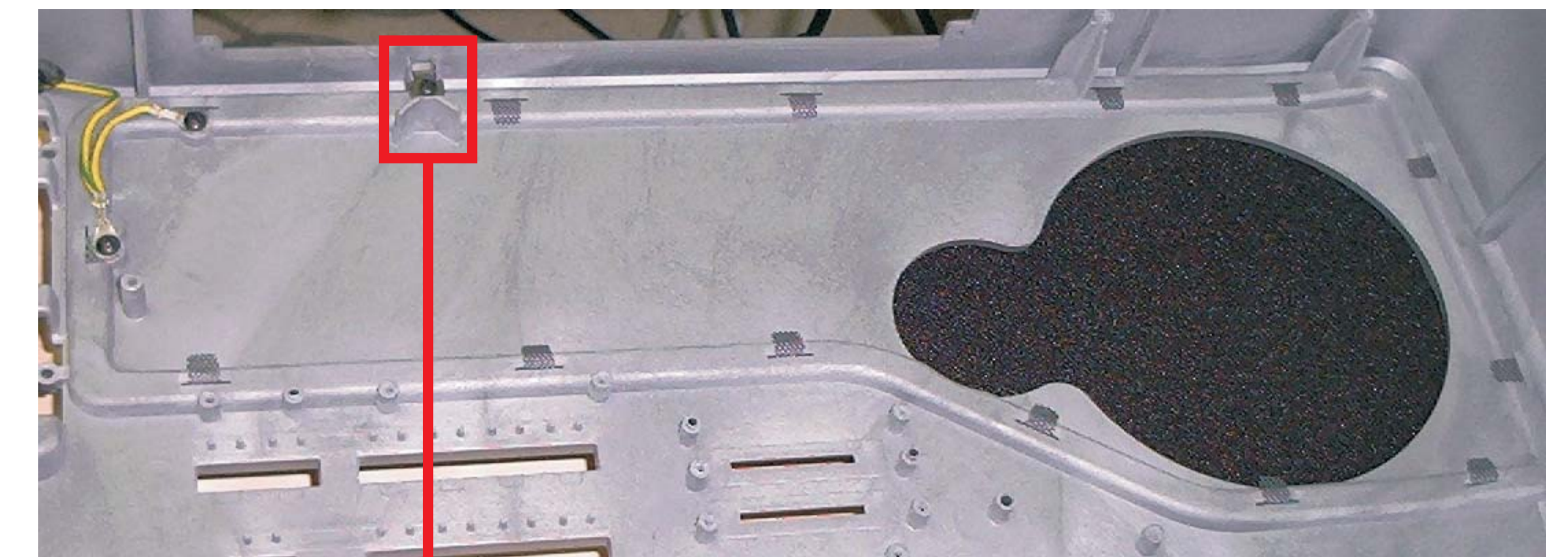


FEL0001090

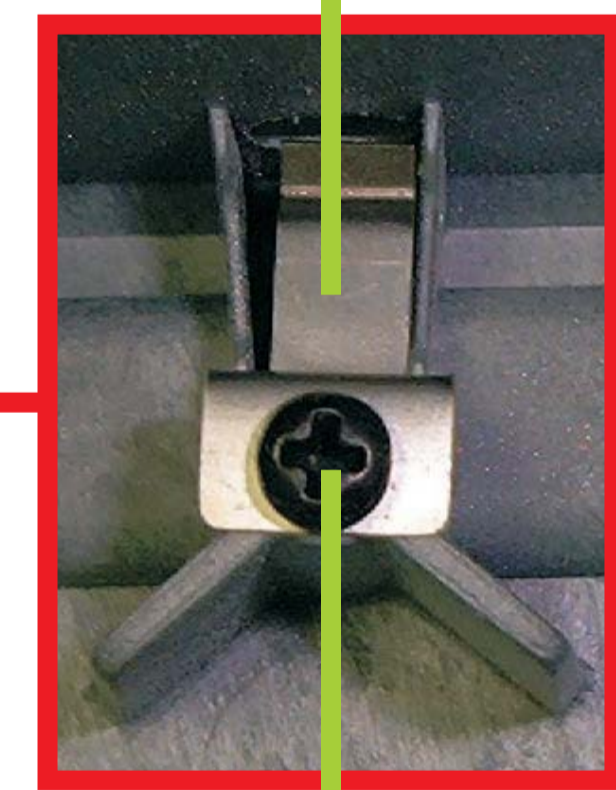
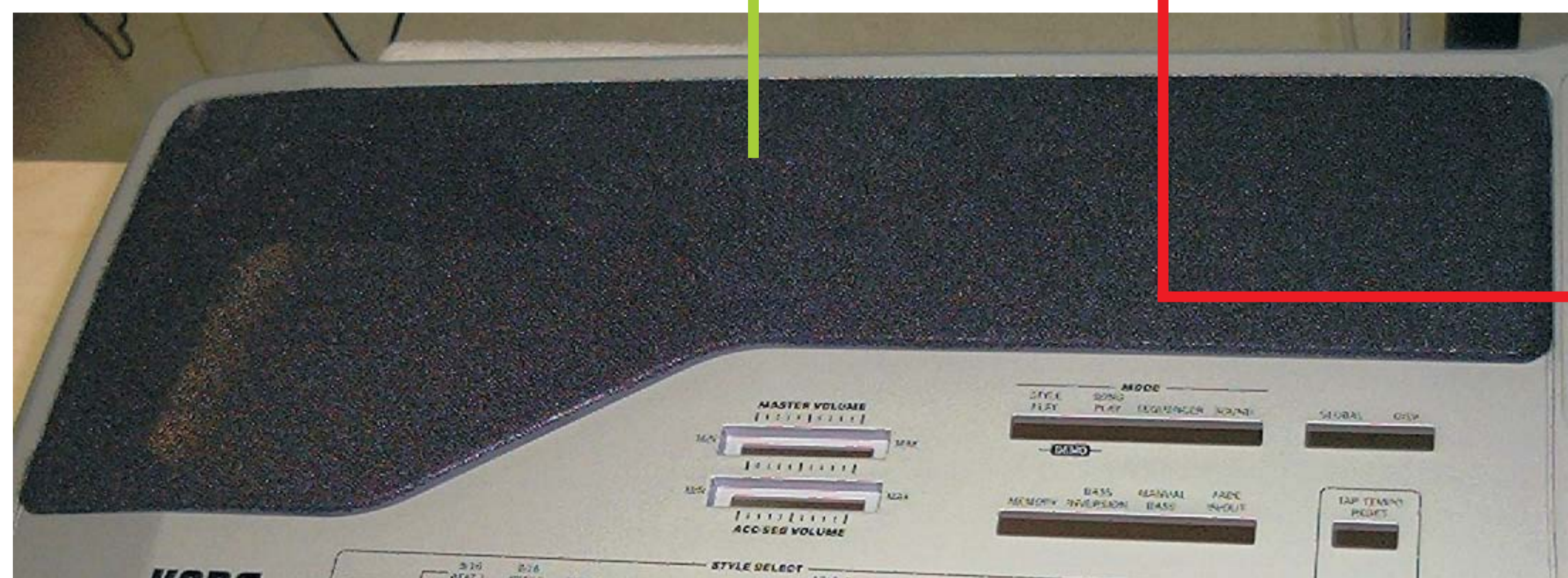


RIL0001293 FEL0001103 RIL0001292

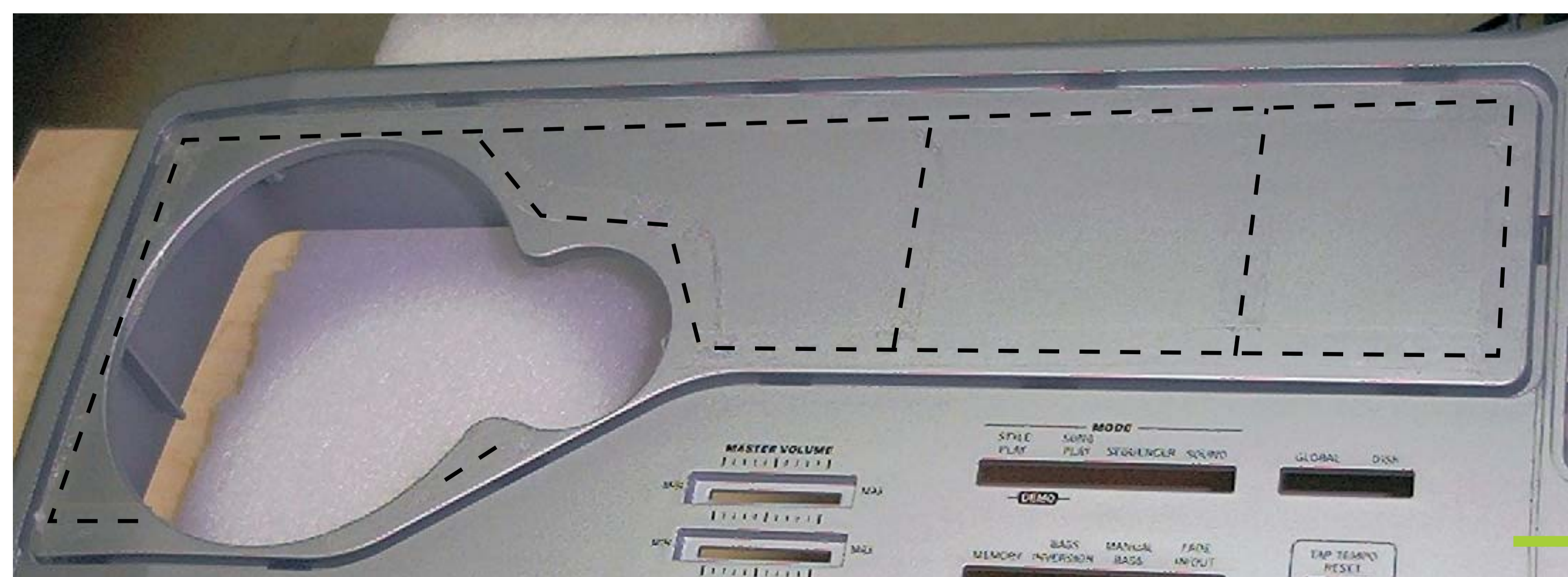
VTA0001084 FER0001214 FER0001208 VTA0001084



FEL0001089

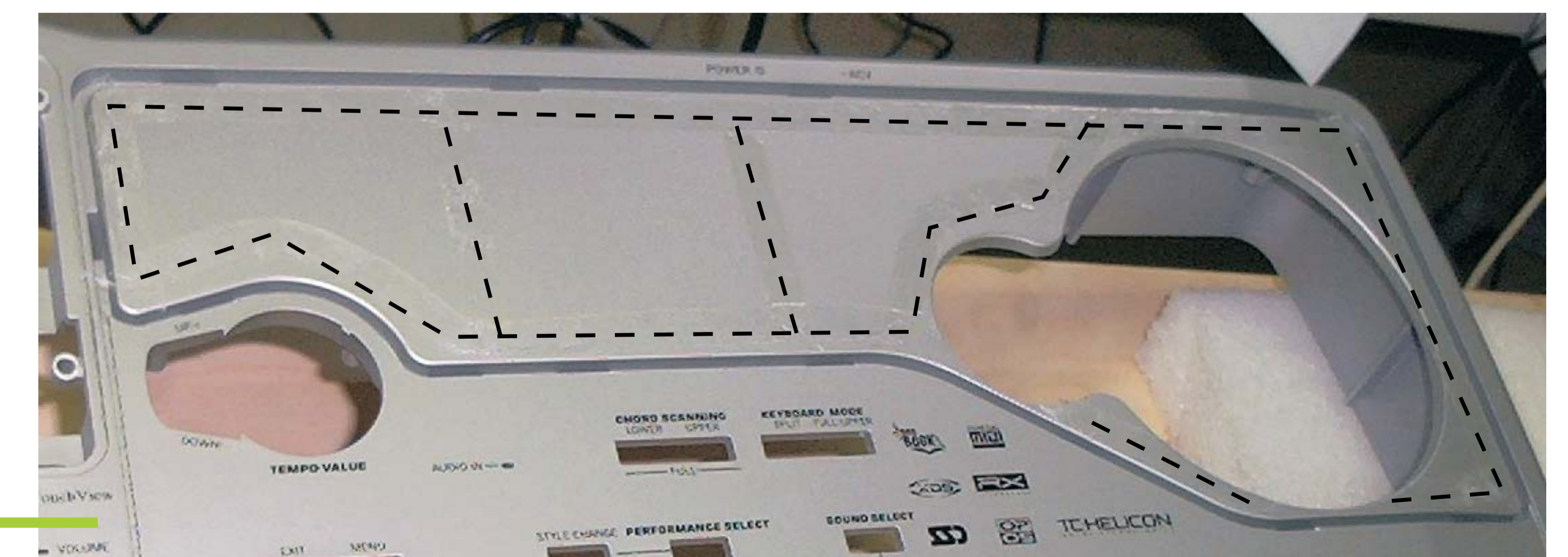


VTA0001051



PLA0002055

----- = FEL0001056



FDD group

RIL0001284 (1)

Staple

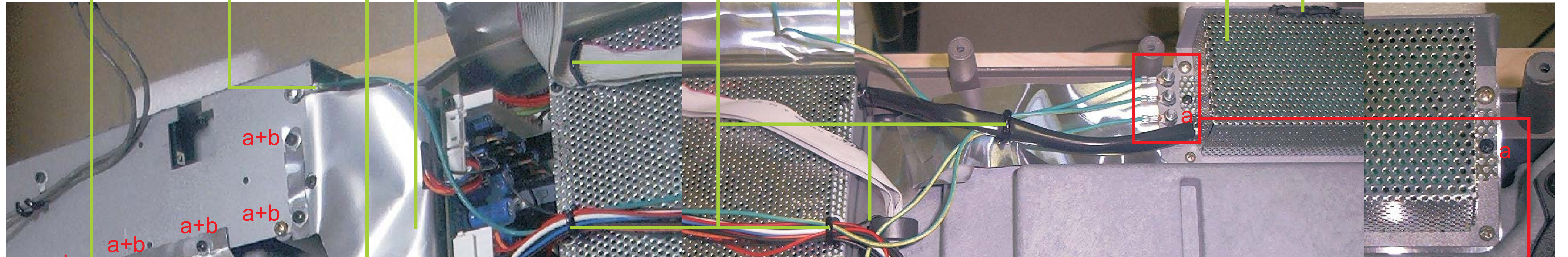
FEL0001111

PLA0001046

RIL0001286

FER0001177

FEL0001103



a = n°25 VTA0001037

b = n°11 VTA0001048

VTA0001045

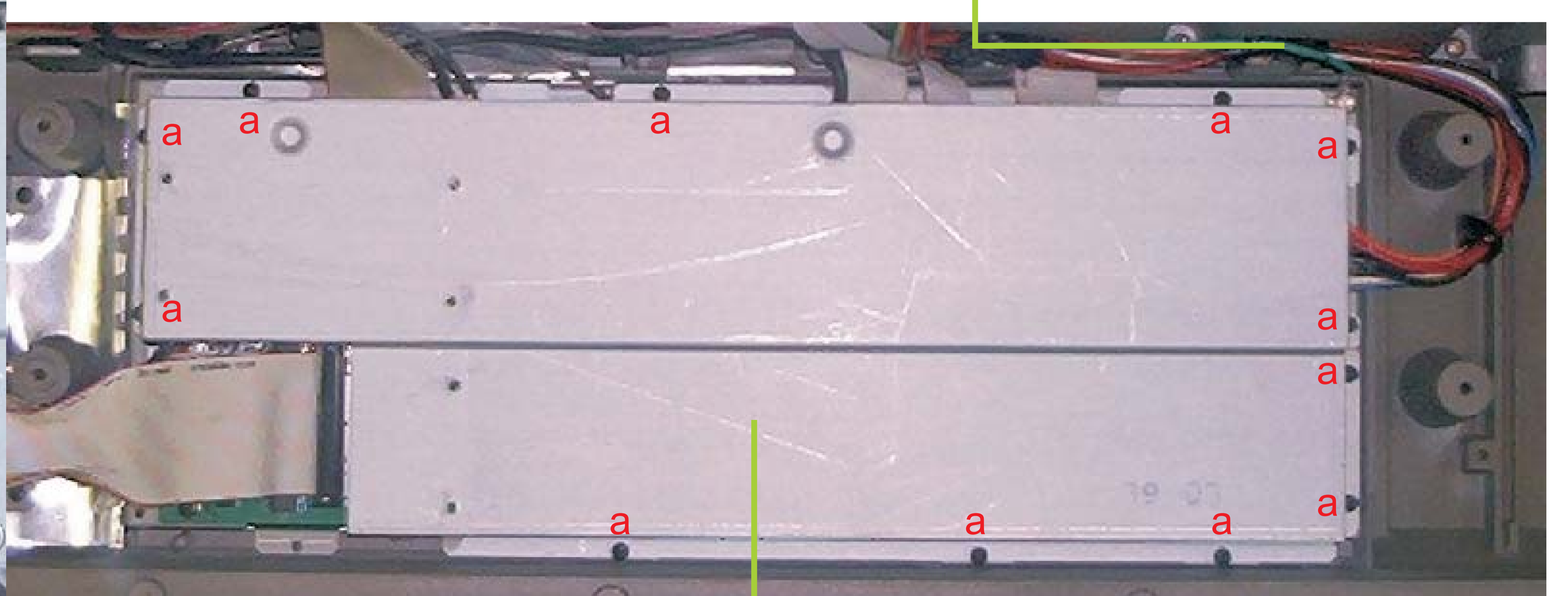
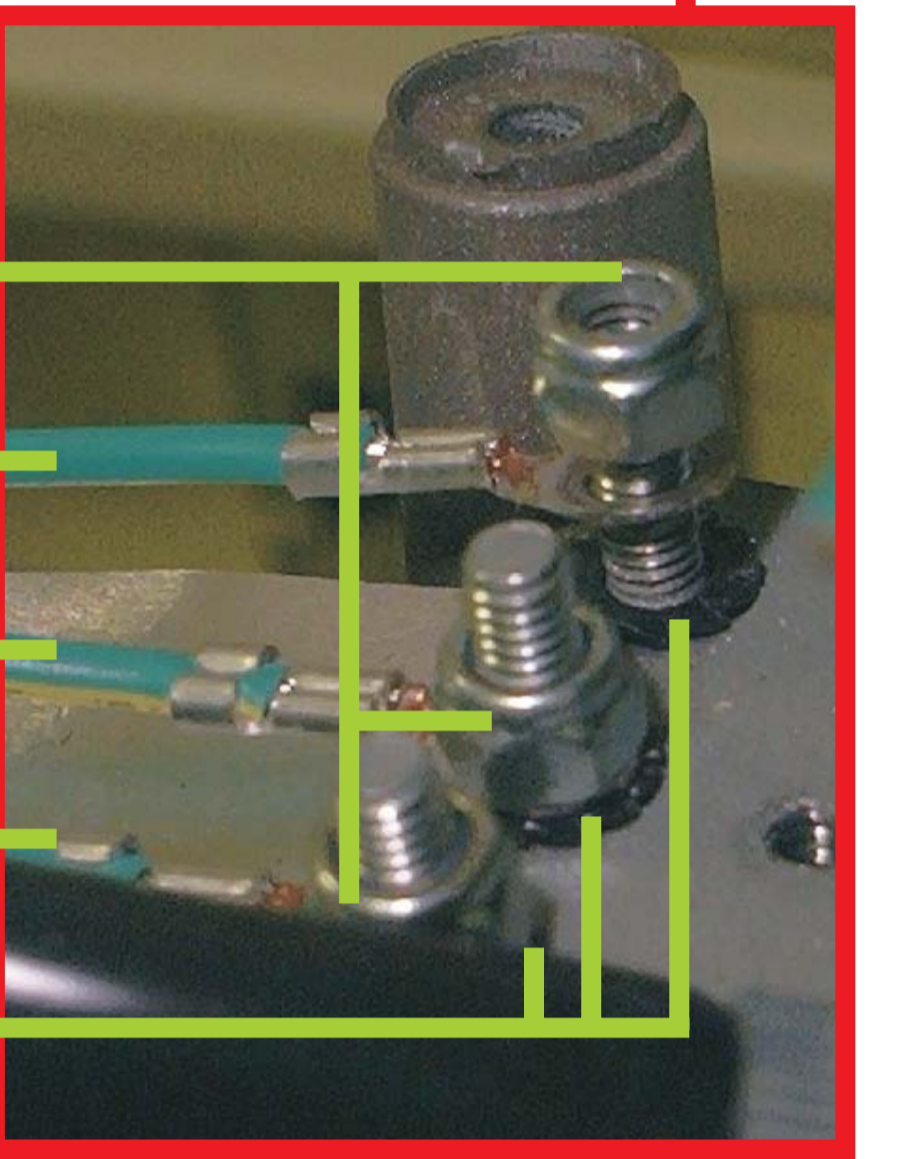
RIL0001286

RIL0001284 (1)

RIL0001284 (2)

VTA0001011

RIL0001284 (2)



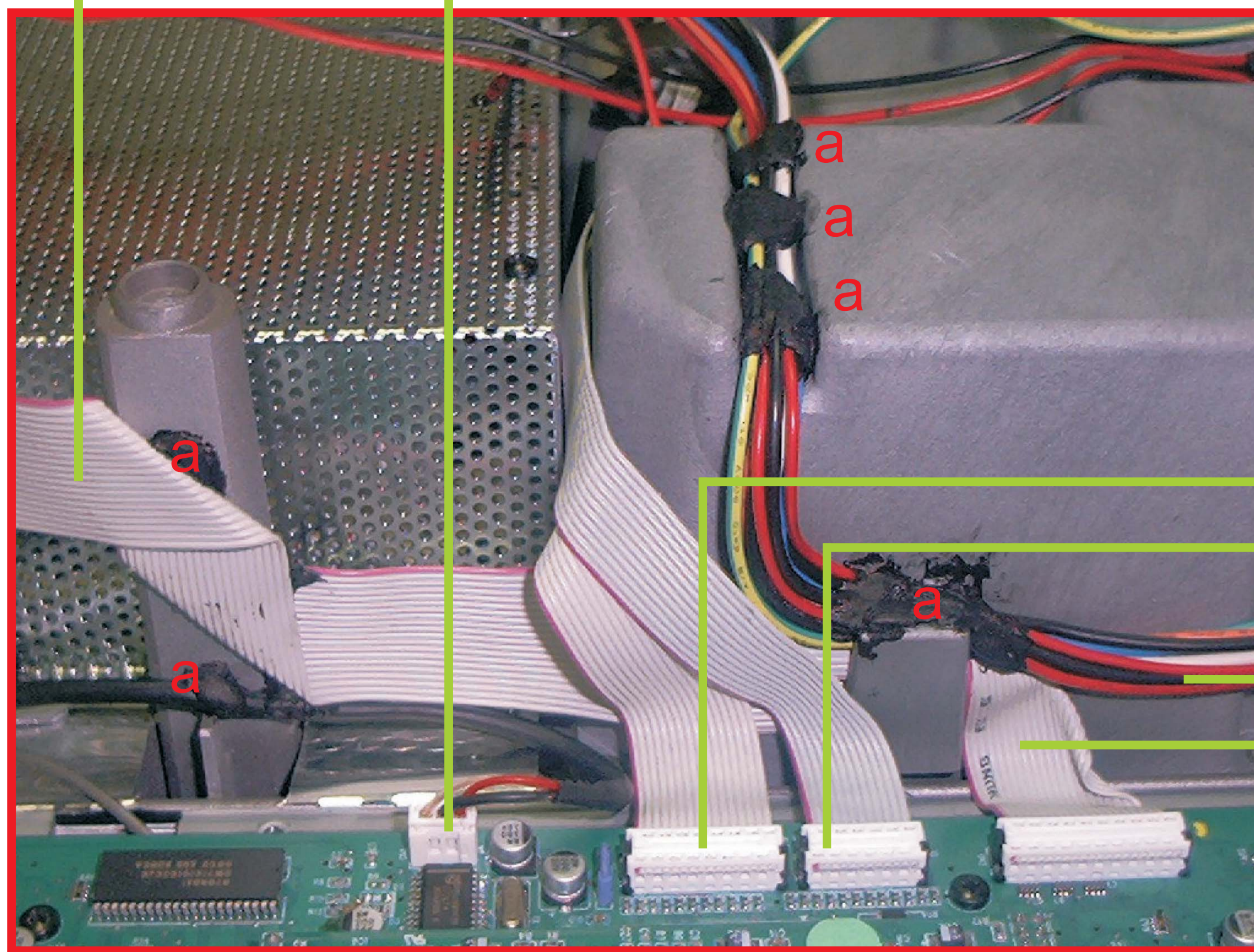
FER0001186

Lower case 1

RIL0001272 RIL0001269

a = n°17 FEL0001103

VTA0001038 + PLA0001046

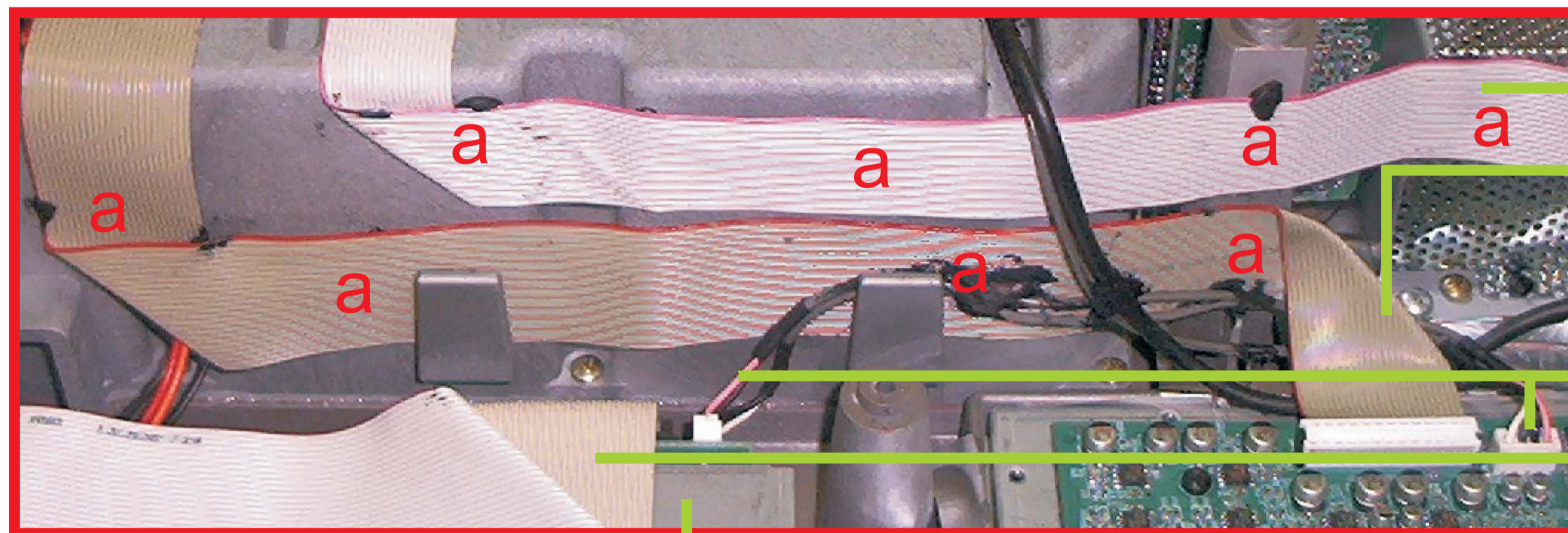
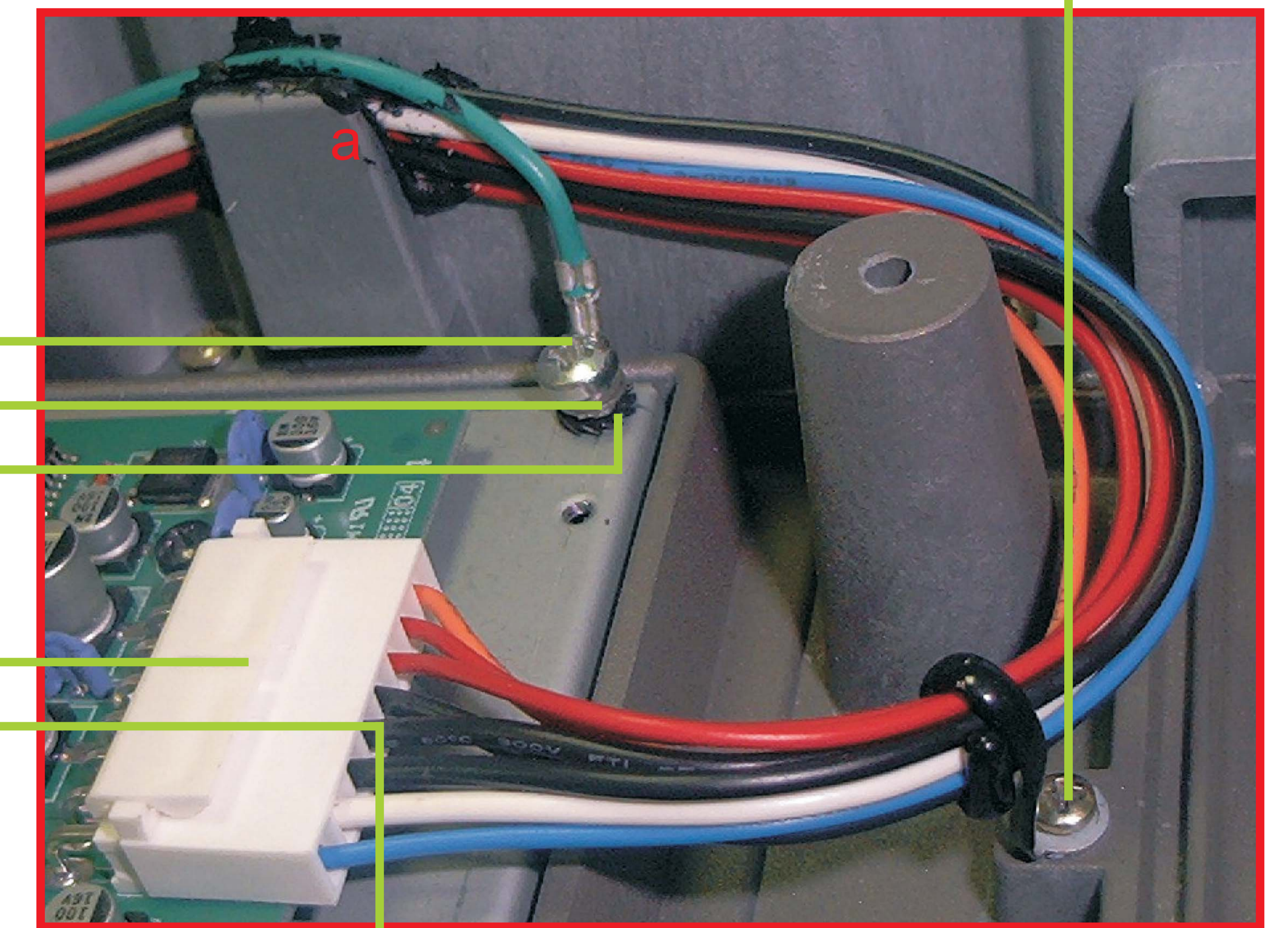


RIL0001291
RIL0001290

RIL0001272

VTA0001050
RIL0001284 (2)
VTA0001011

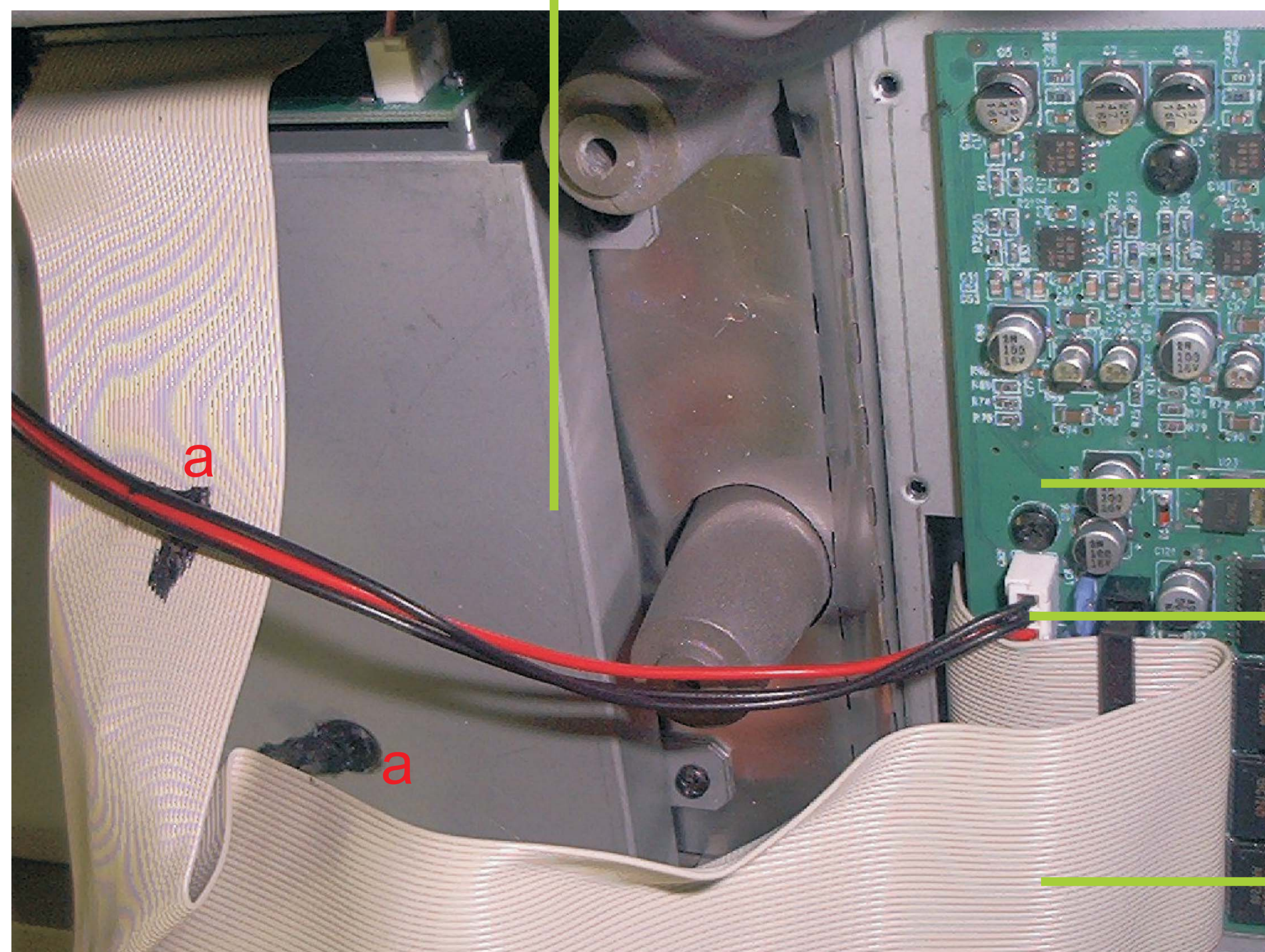
RIL0001267
BOB0001001



RIL0001272
RIL0001271

RIL0001278
RIL0001205

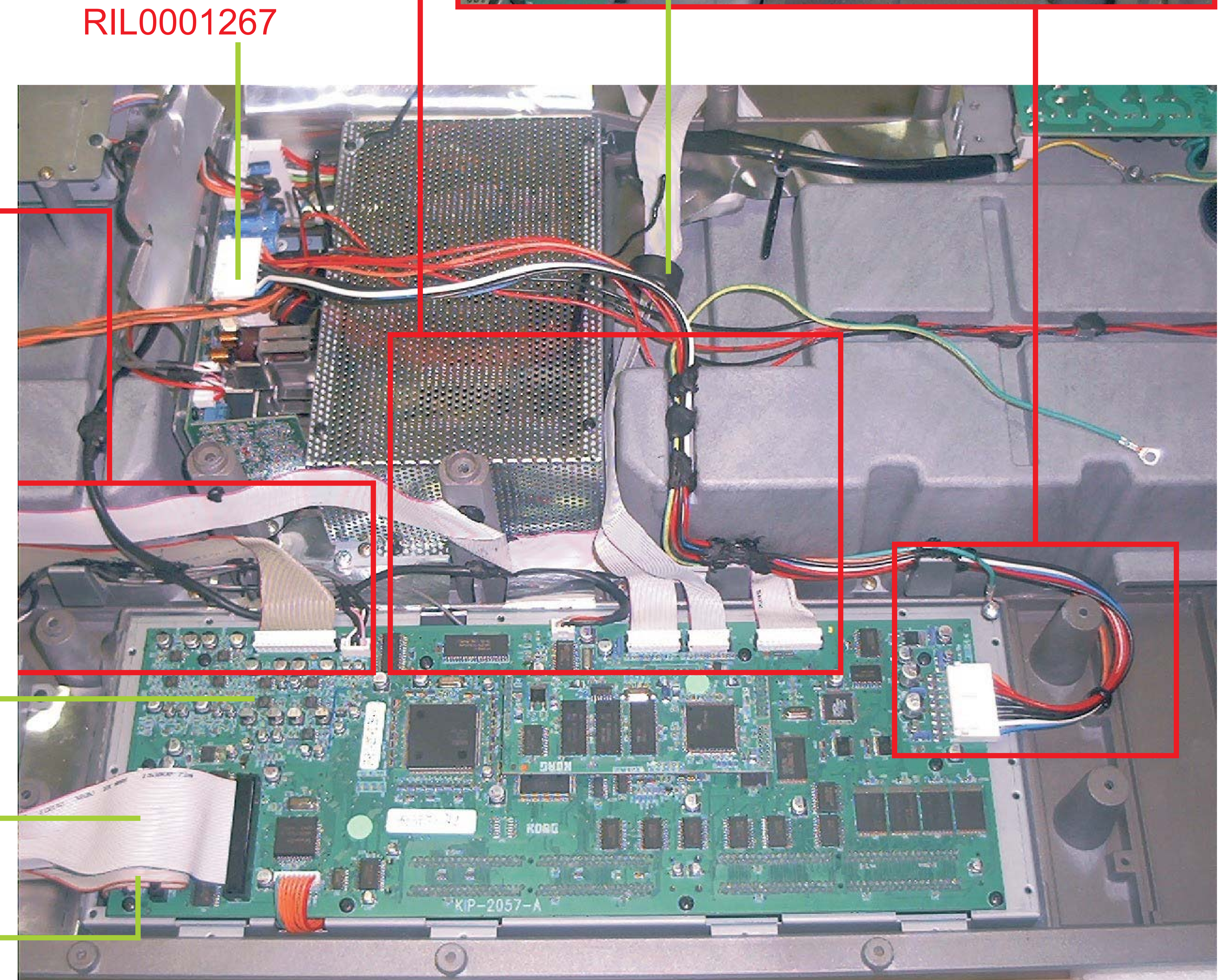
CDRom group



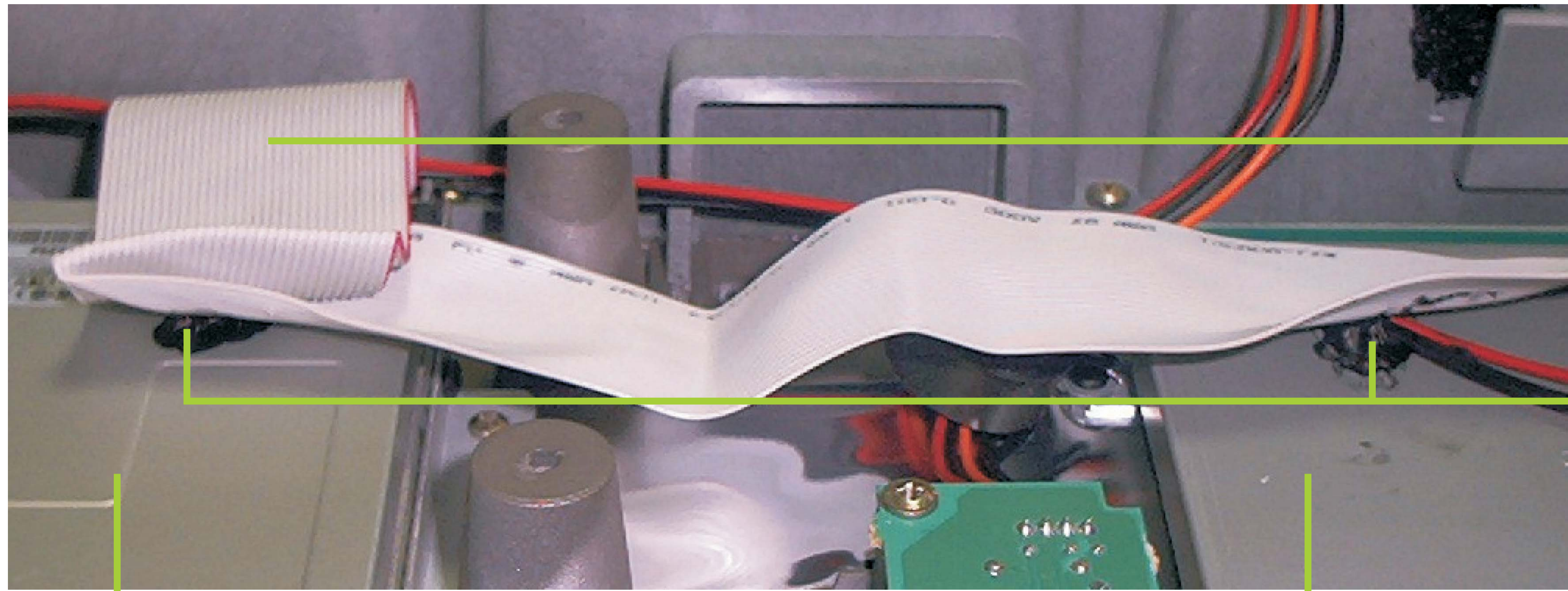
GRA1002057

RIL0001264
FDD group

RIL0001205



RIL0001267



FDD group

RIL0001265

PLA0001046

CDRom group

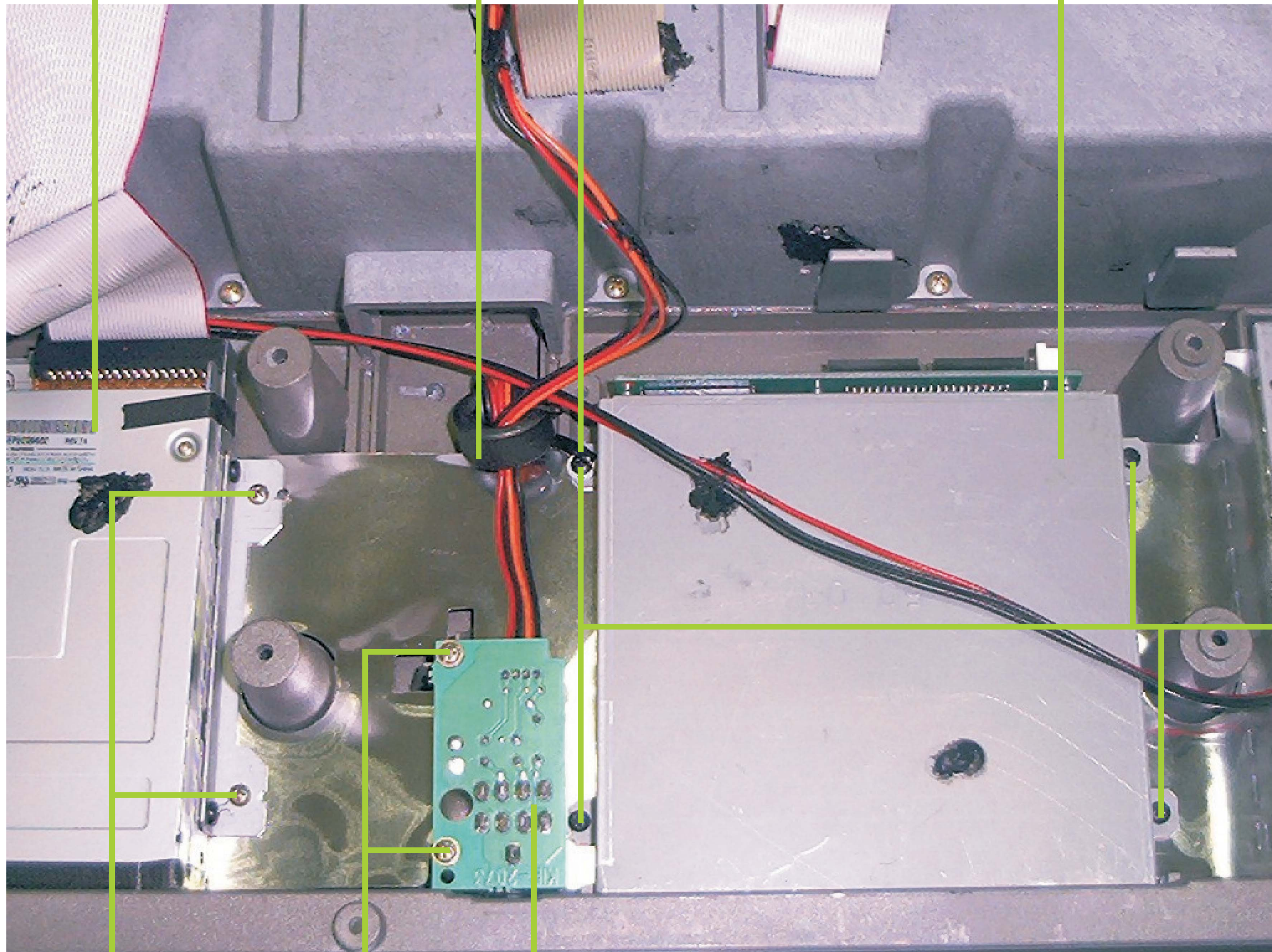
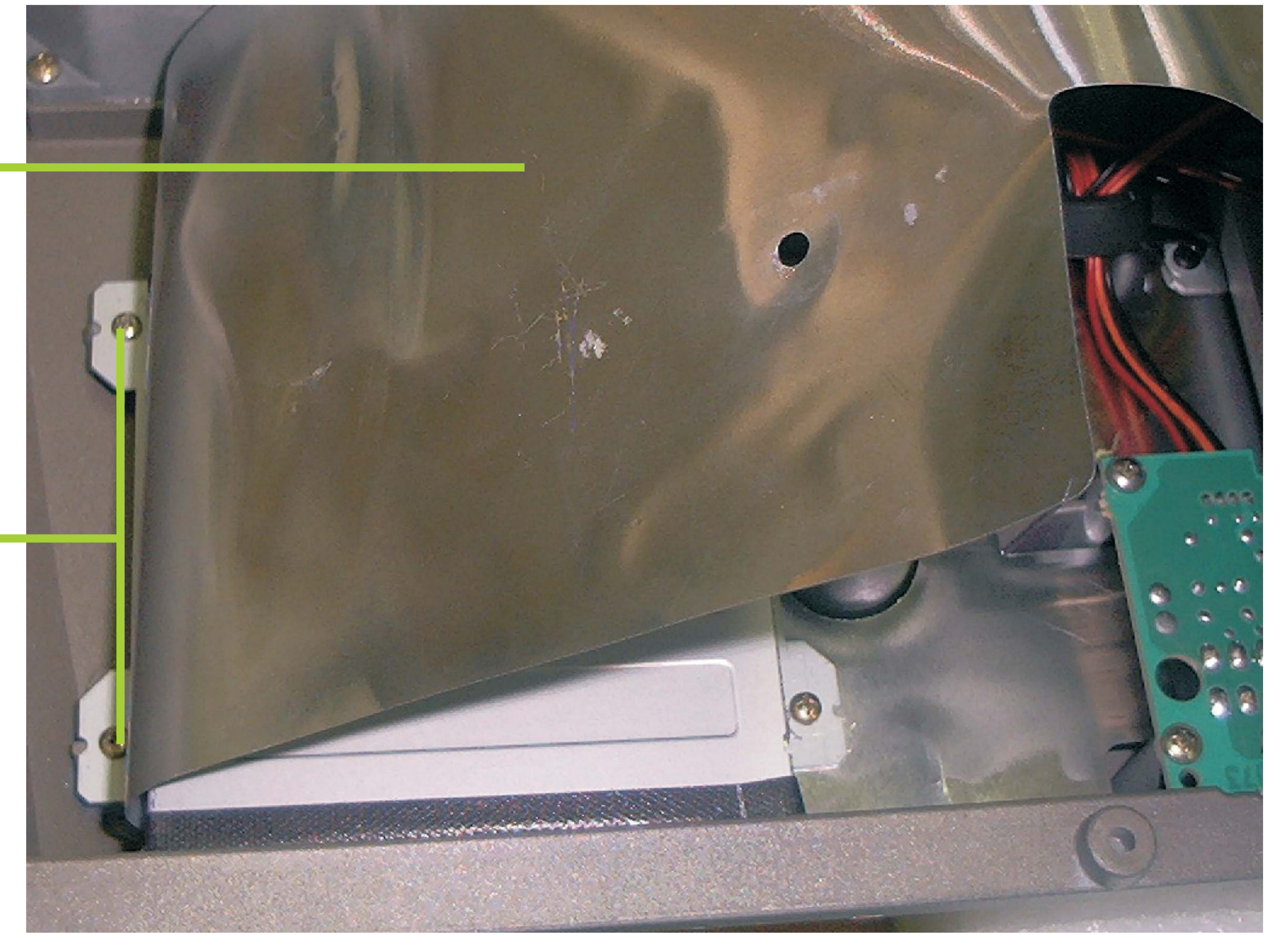
VTA0001038

VTA0001010

GRA0002073

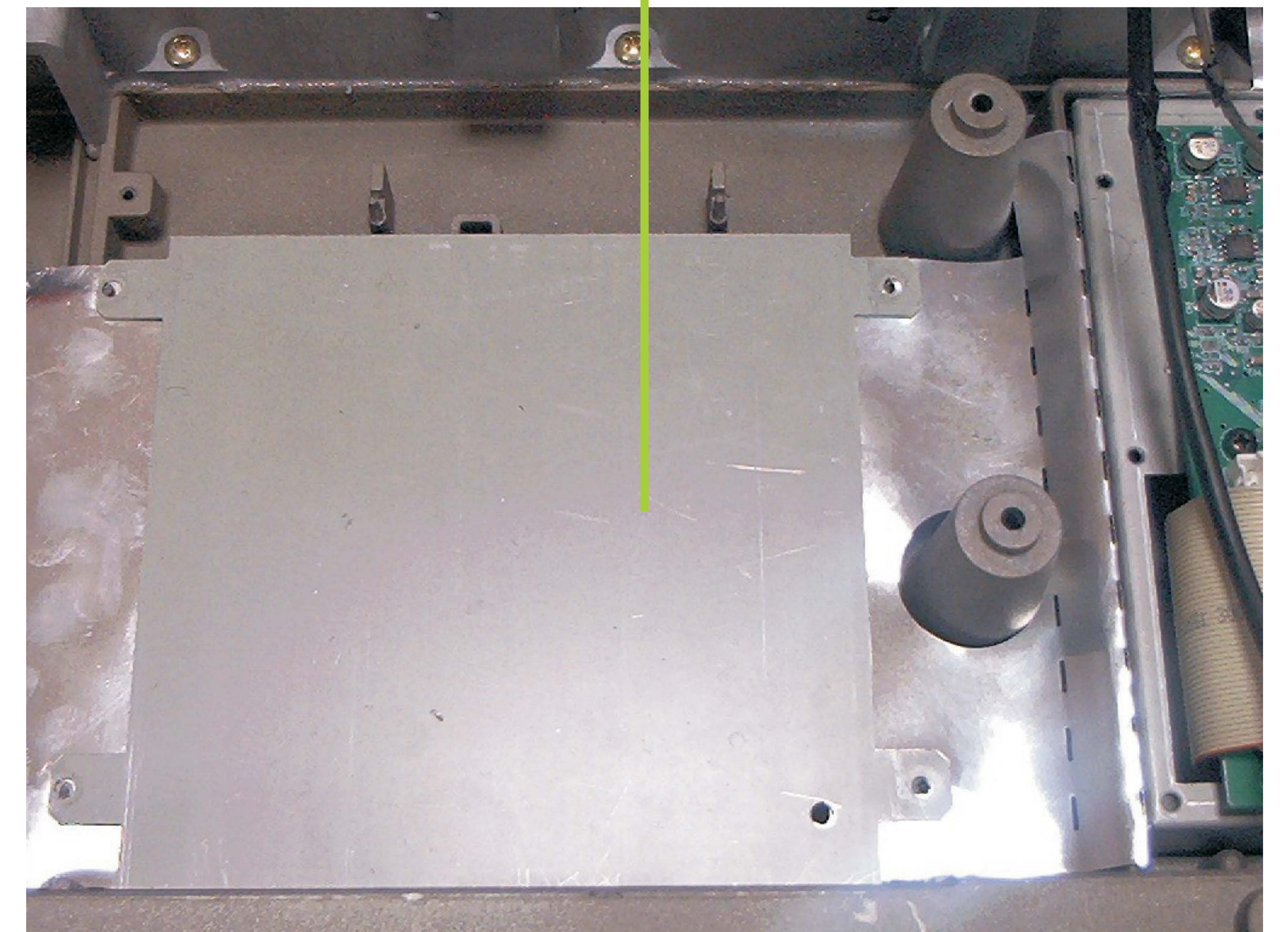
FDD group

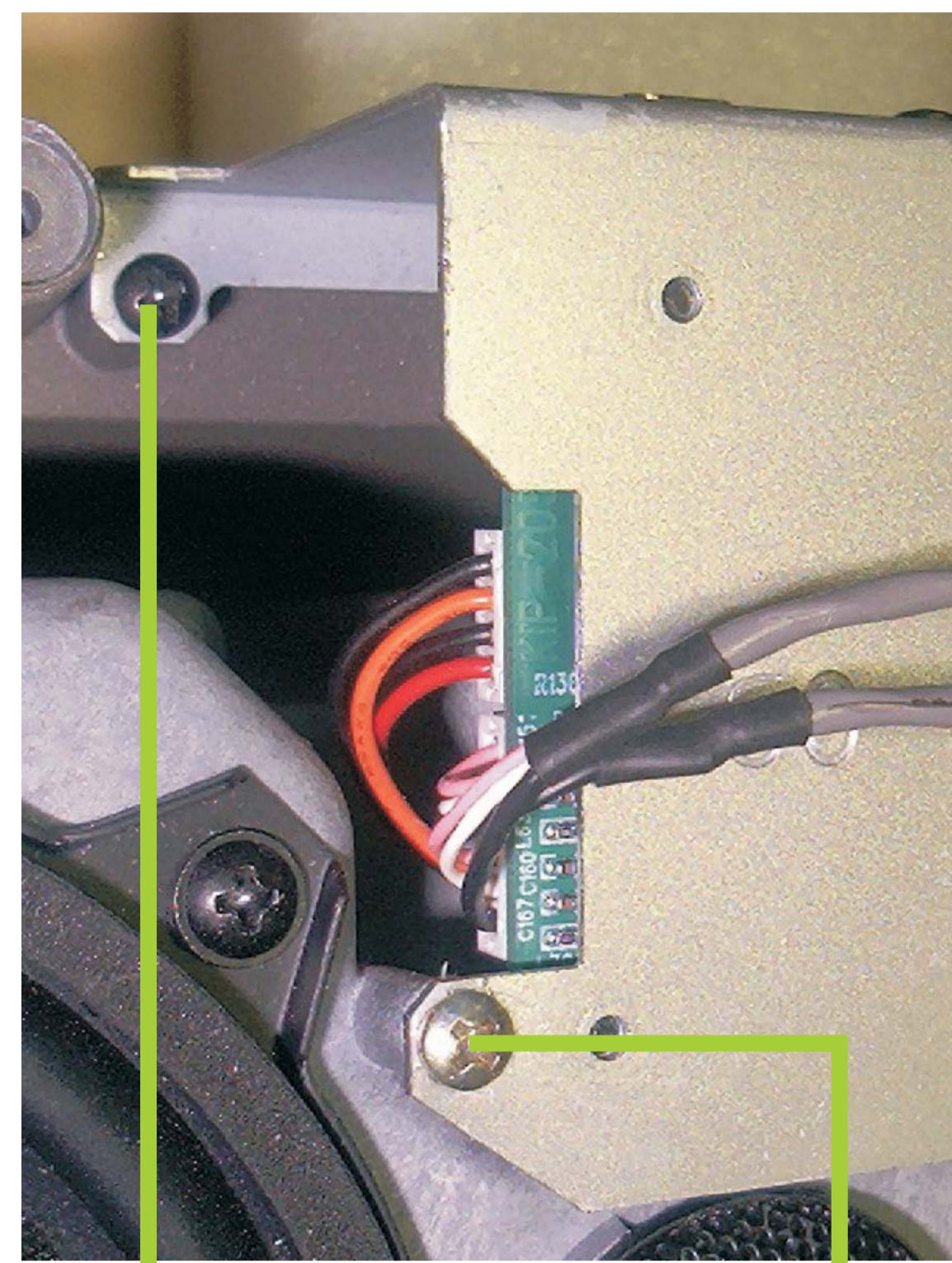
FEL0001103
VTA0001038



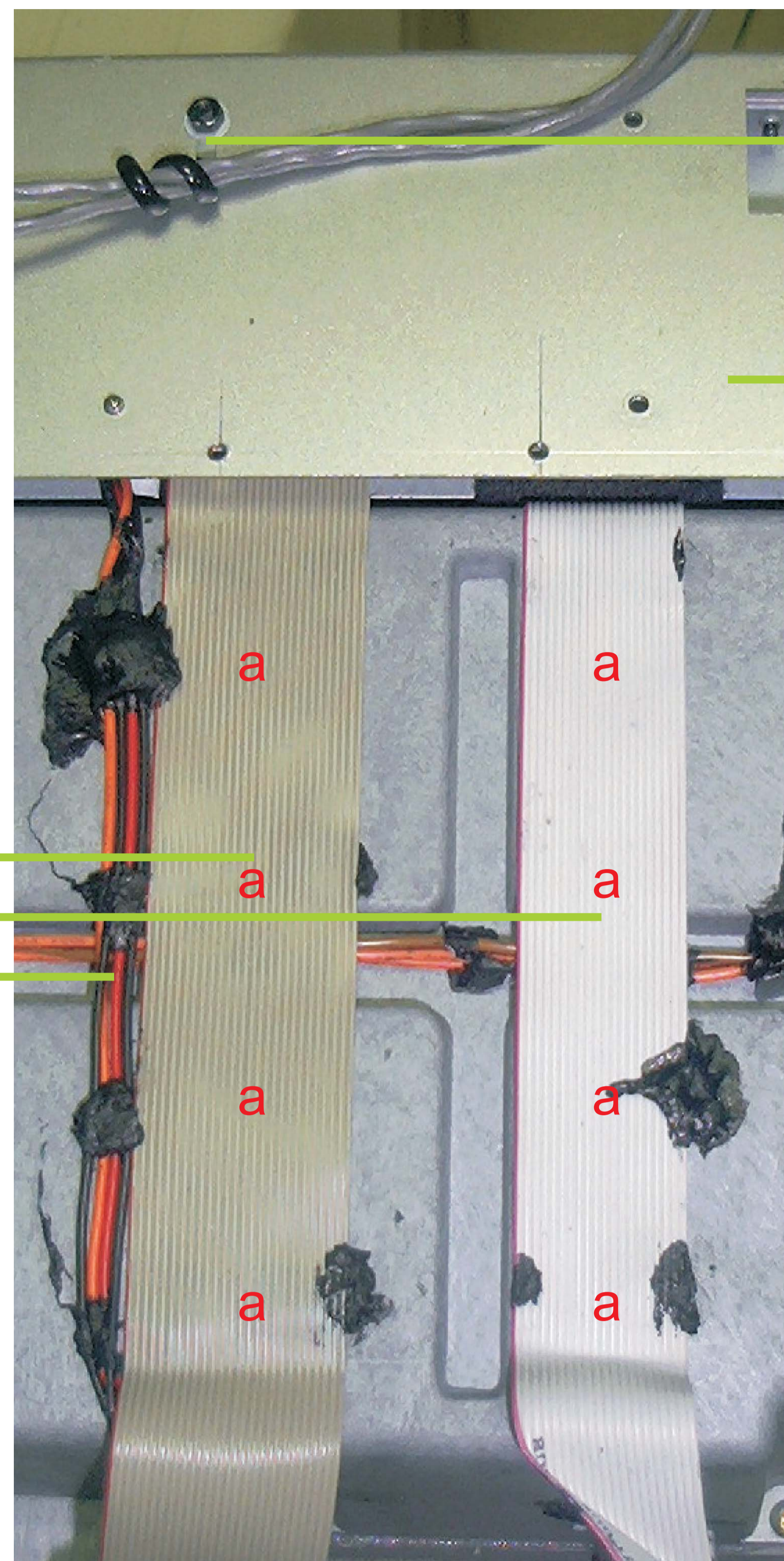
VTA0001051

FER0001215





VTA0001084
 VTA0001067
 RIL0001271
 RIL0001272
 RIL0001265



VTA0001084
 PLA0001046
 RIL0001284(1)
 VTA0001050
 VTA0001011
 Output group

RIL0001268
 RIL0001283

VTA0001067

Bottom view

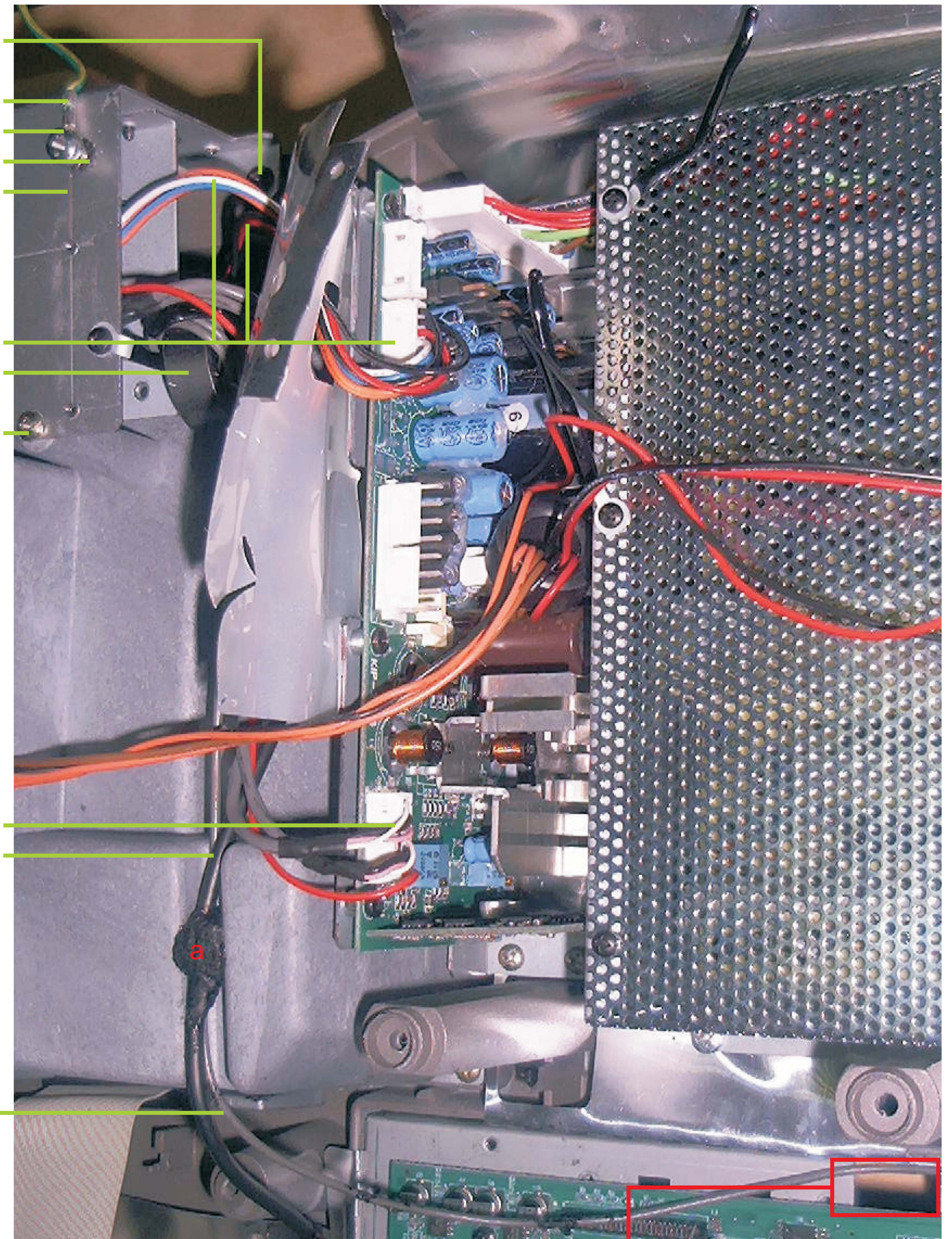


a = n°10 FEL0001103

PLA0001046

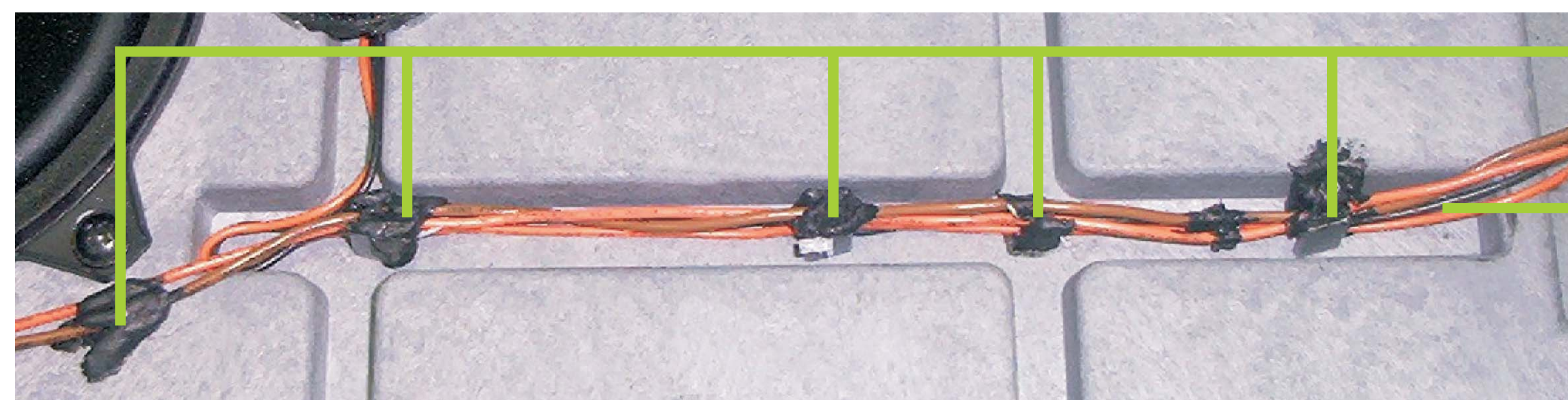
RIL0001287
 RIL0001269

RIL0001283



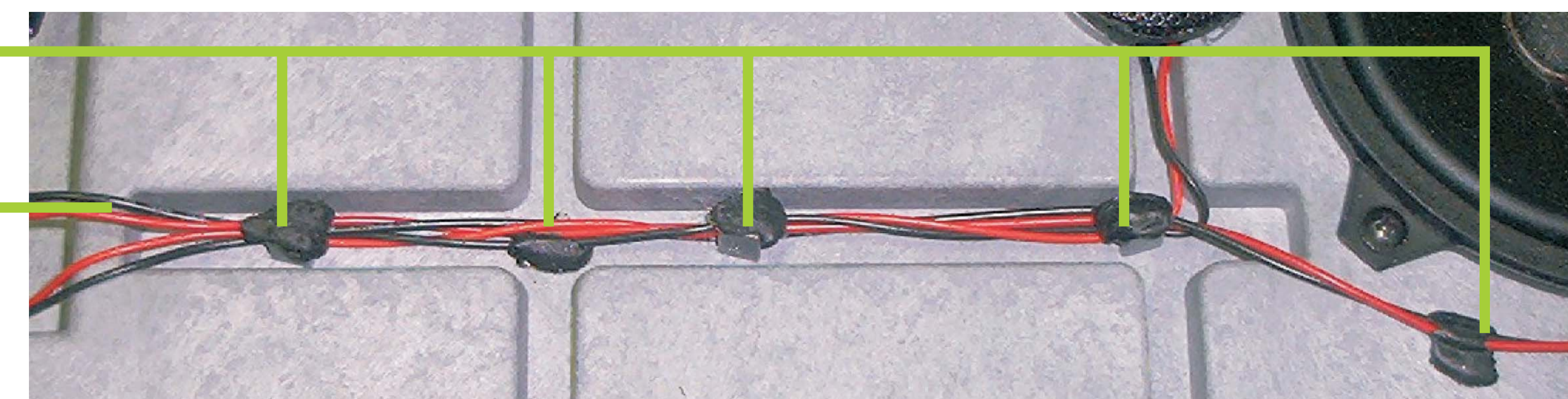
To the bottom view

Lower case 4



FEL0001103

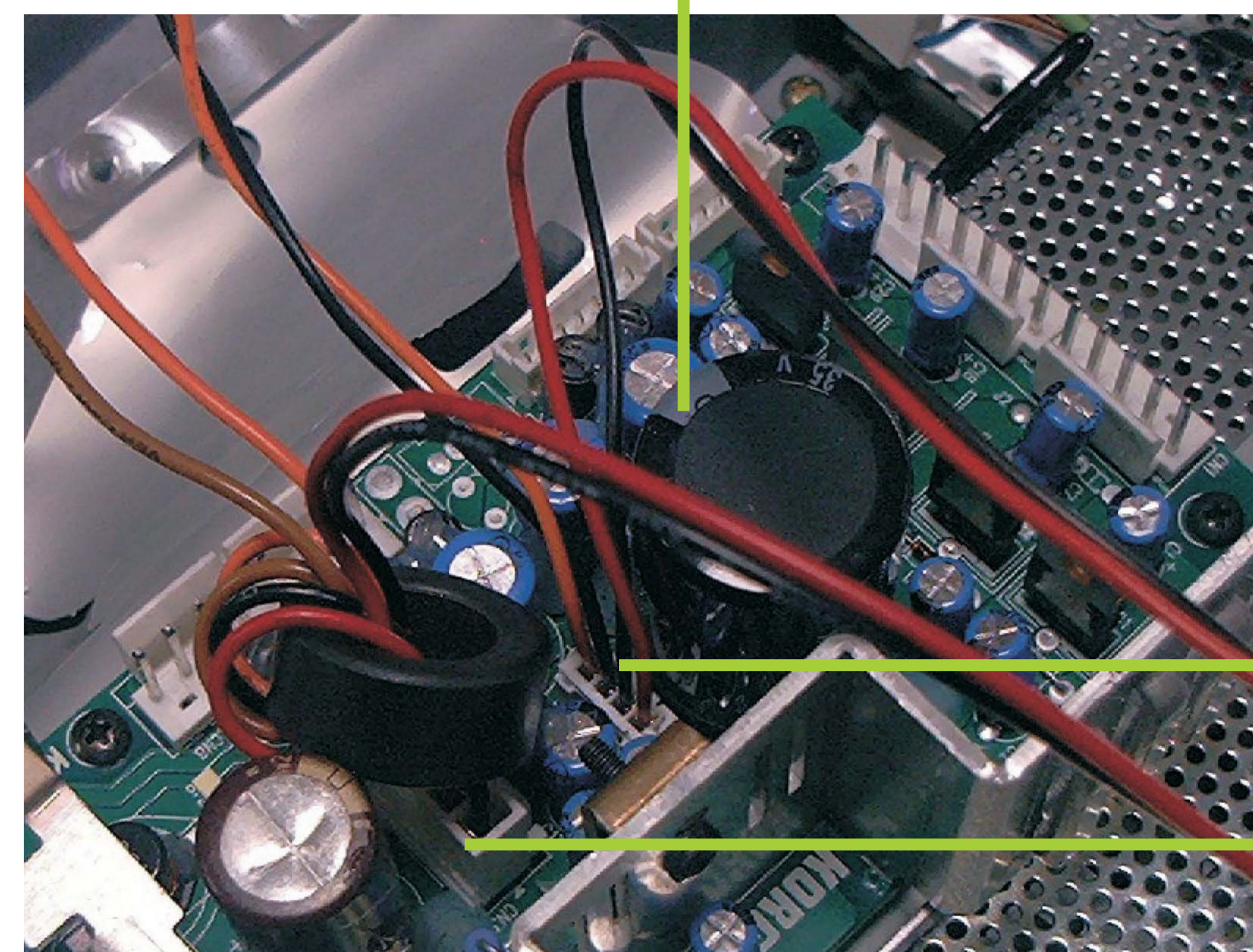
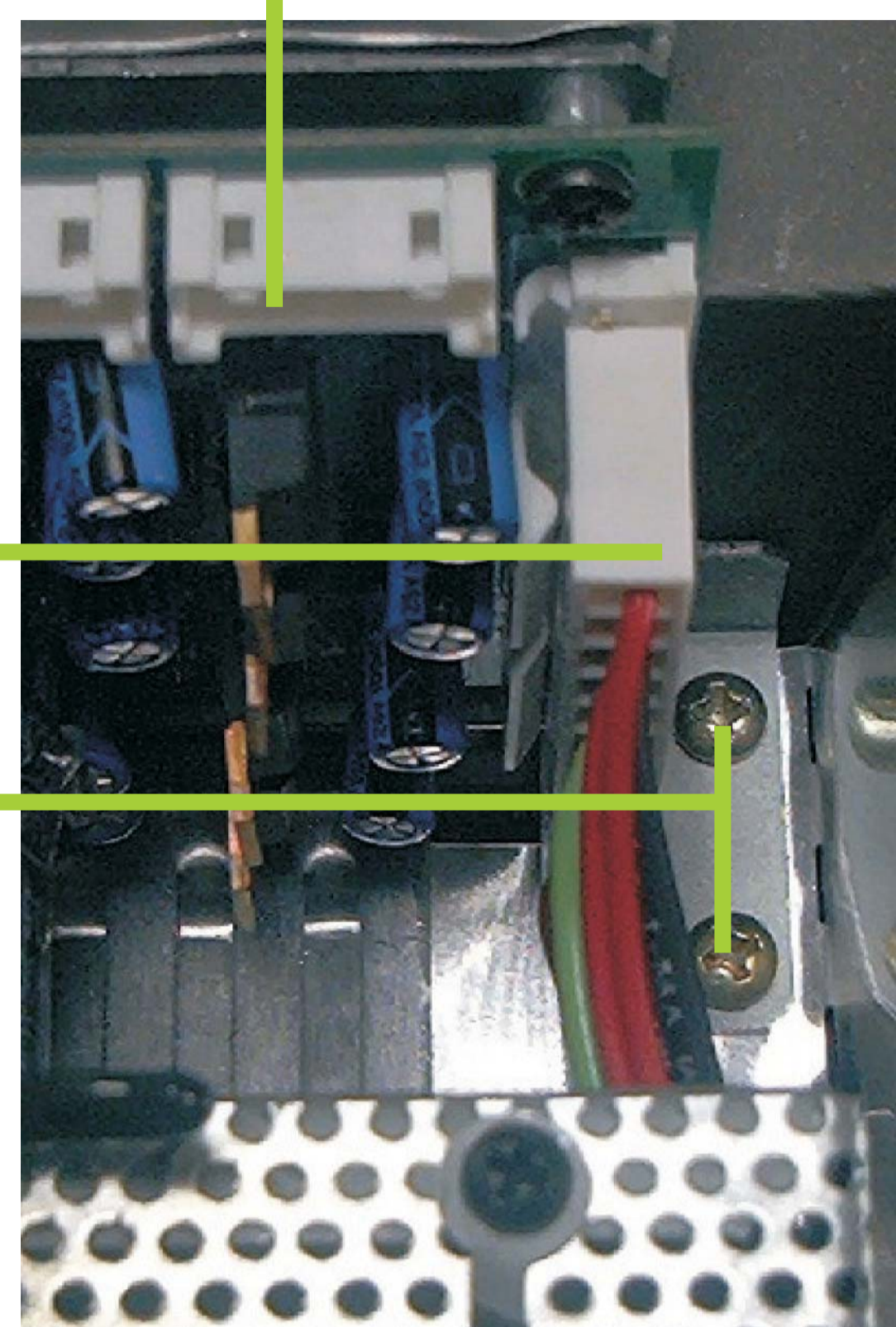
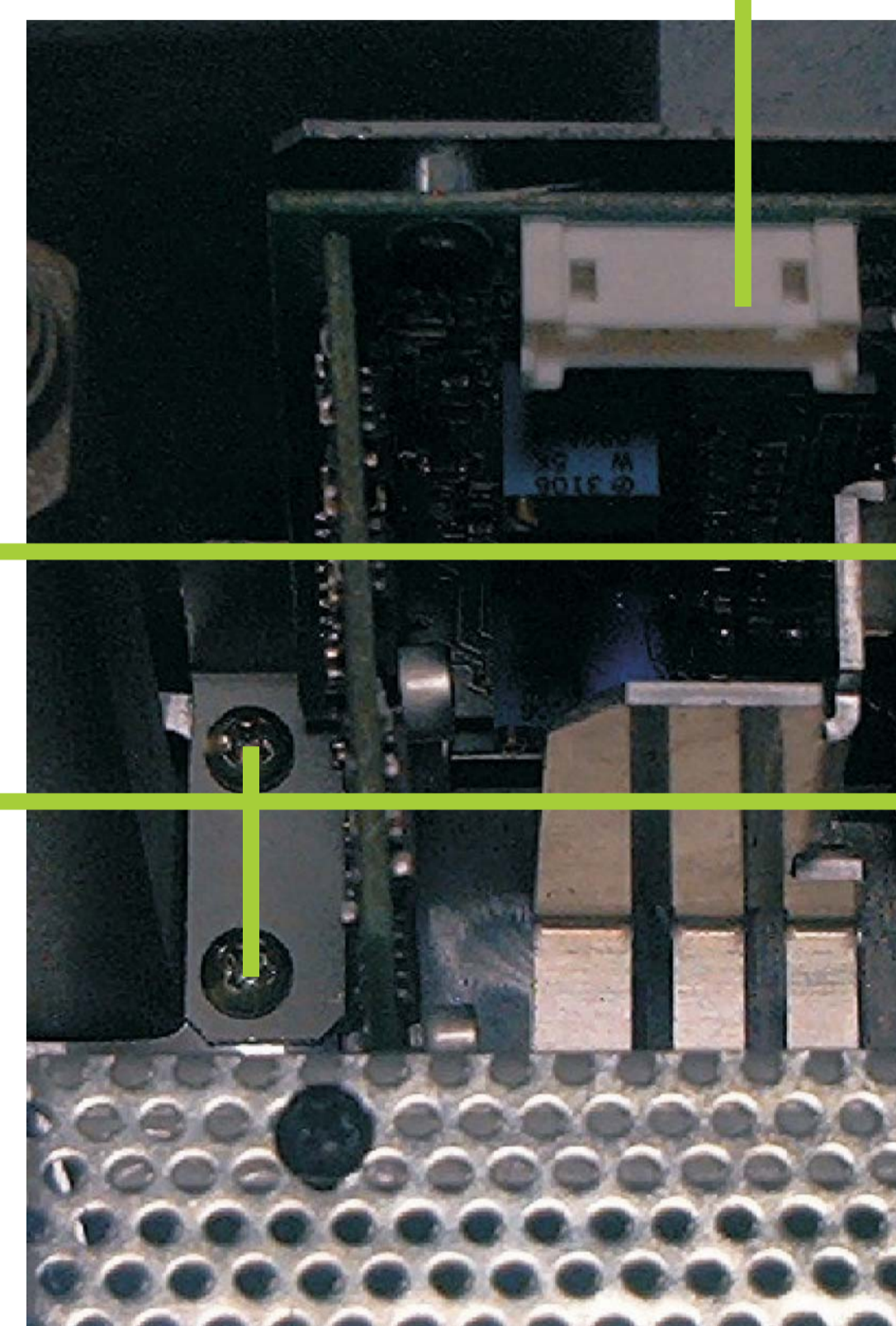
RIL0001288 + RIL0001289



Amplifier group

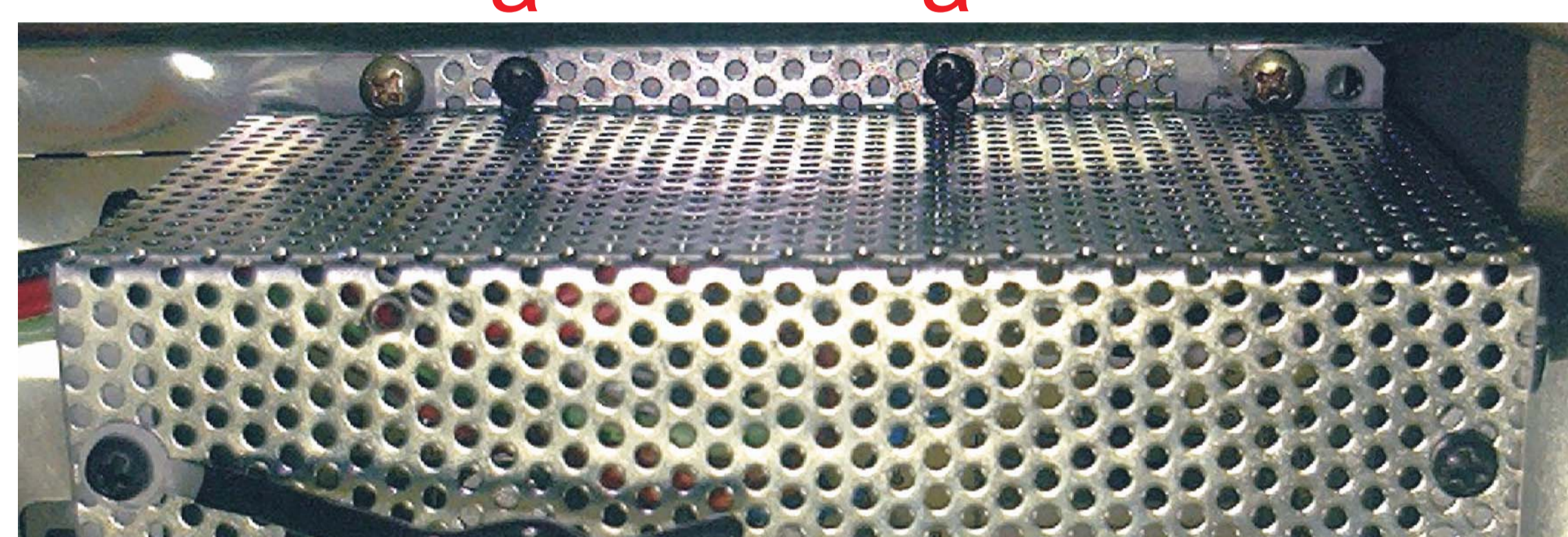
RIL0001266

VTA0001067



RIL0001289

RIL0001288

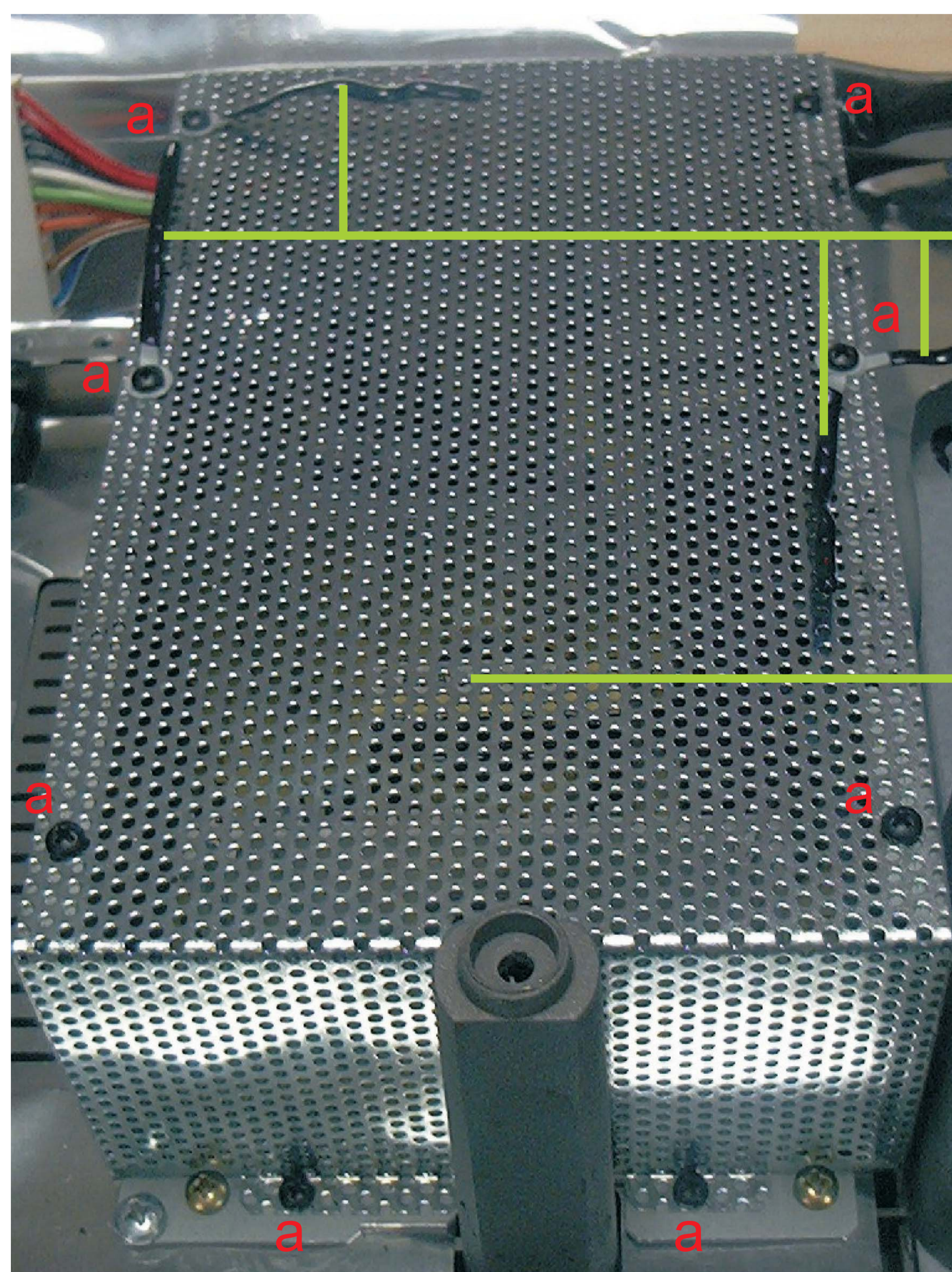


a

a

RIL0001266

Main filter group



a

a

a

a

a

a

a

a

PLA0001171

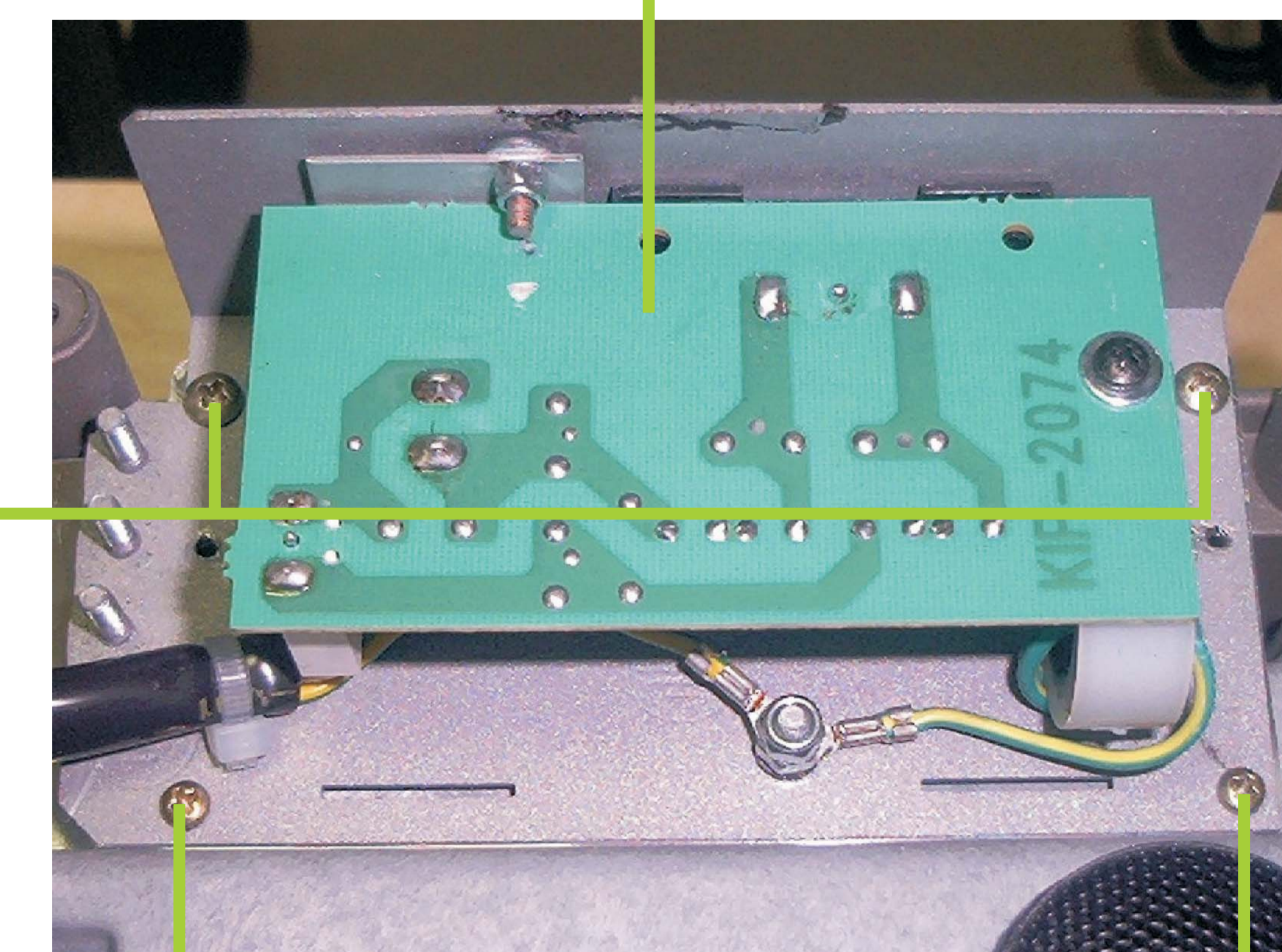
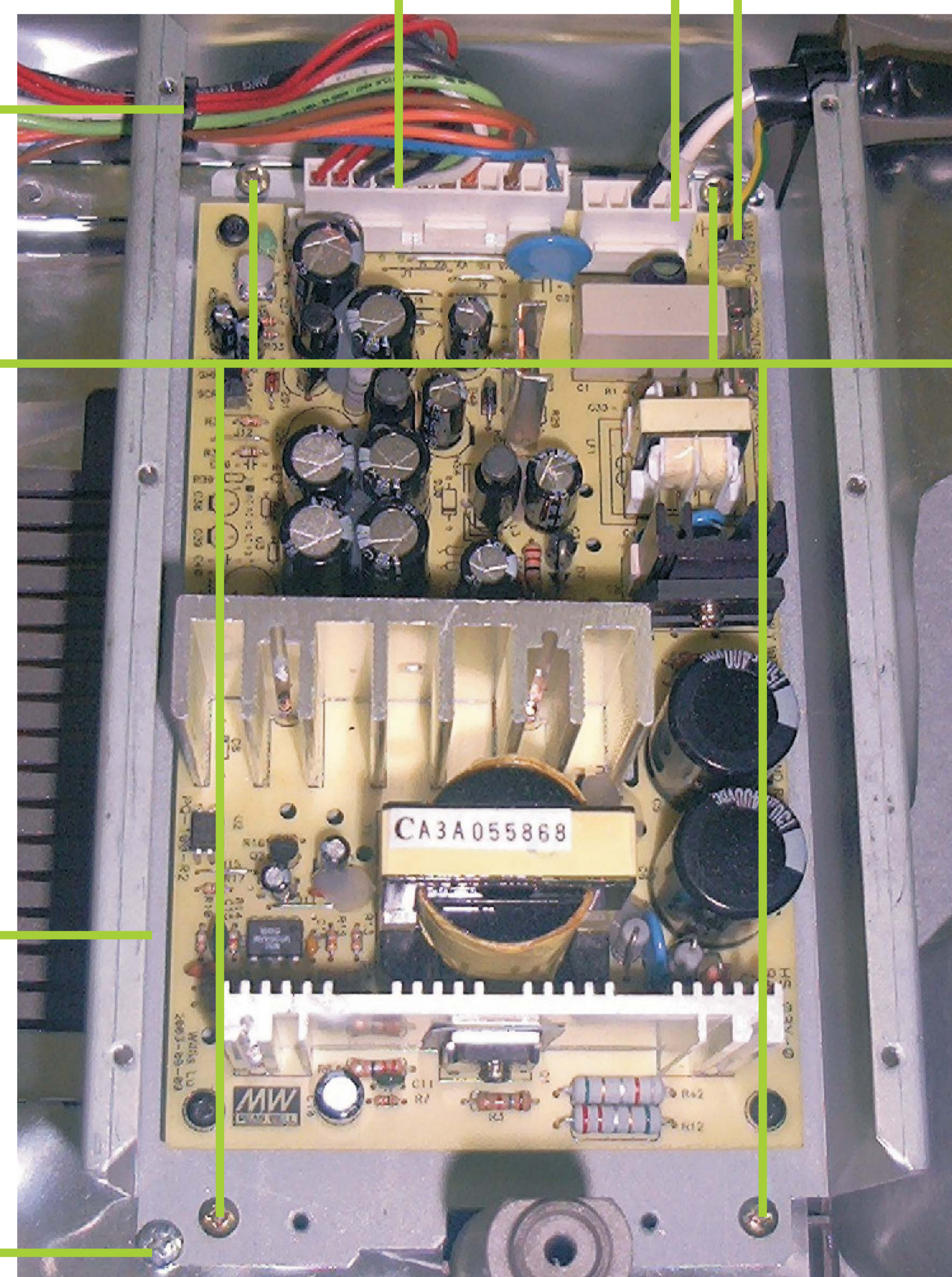
PLA0001046

VTA0001067

FER0001179

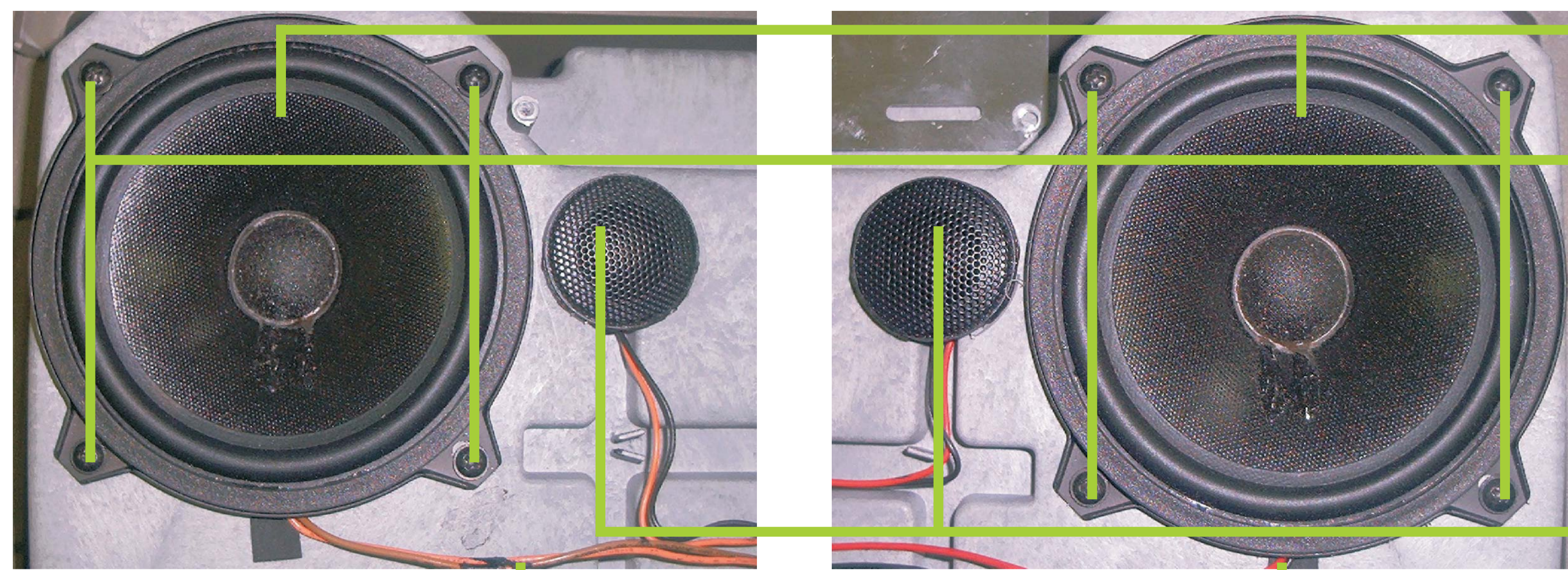
Switching group

VTA0001050



VTA0001038

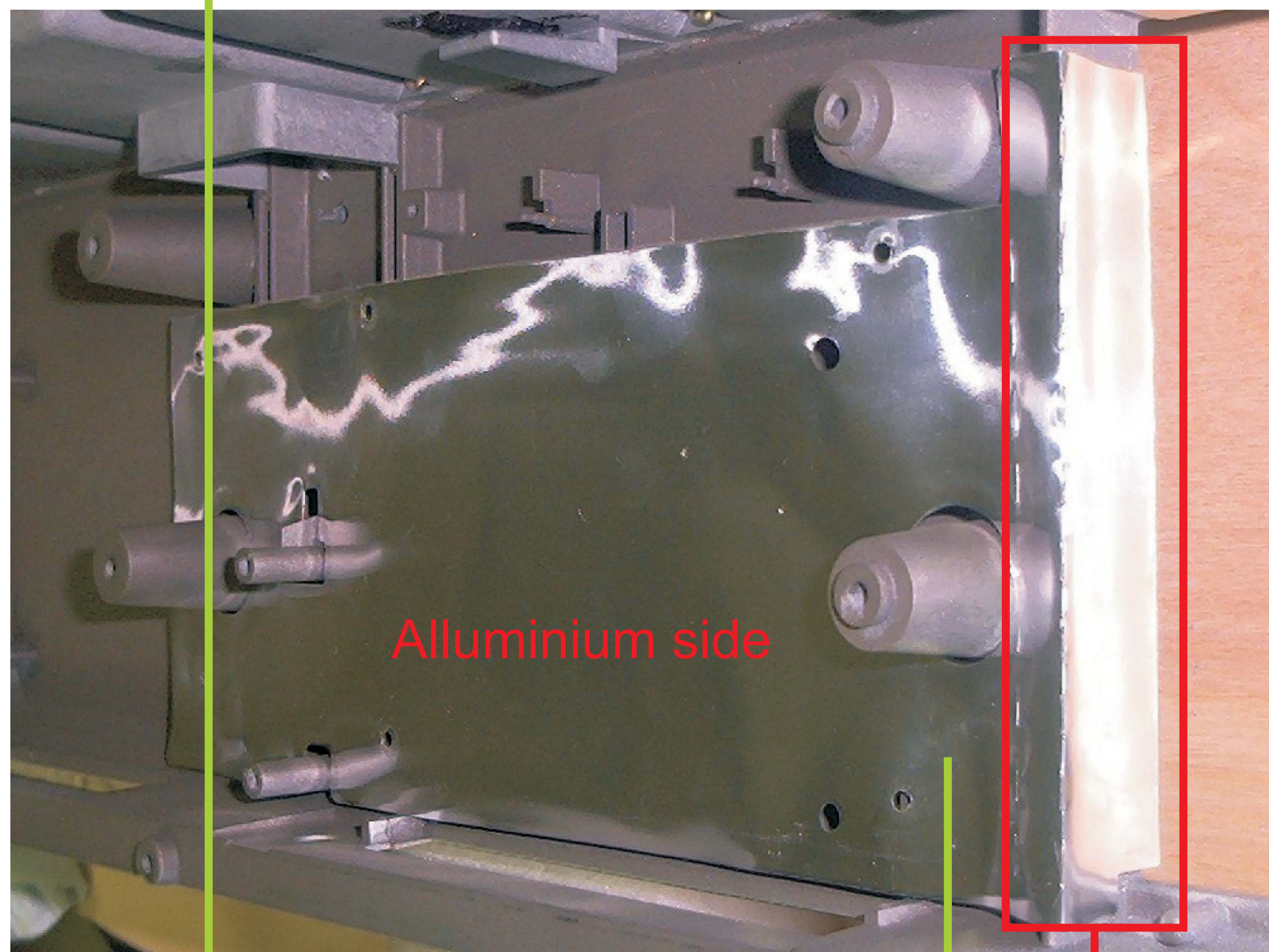
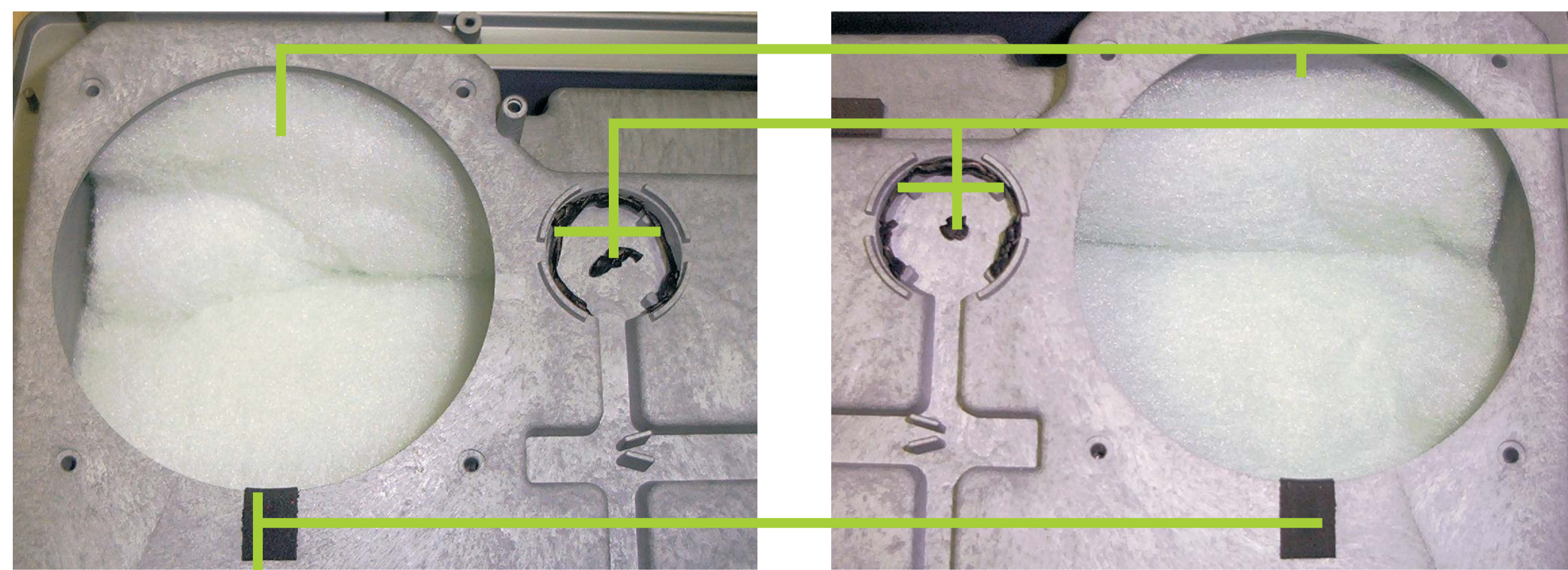
a = n°10 VTA0001037



ALT0001020

VTA0001004
CPU group
VTA0001051

RIL0001288
RIL0001289
FEL0001097
FEL0001103

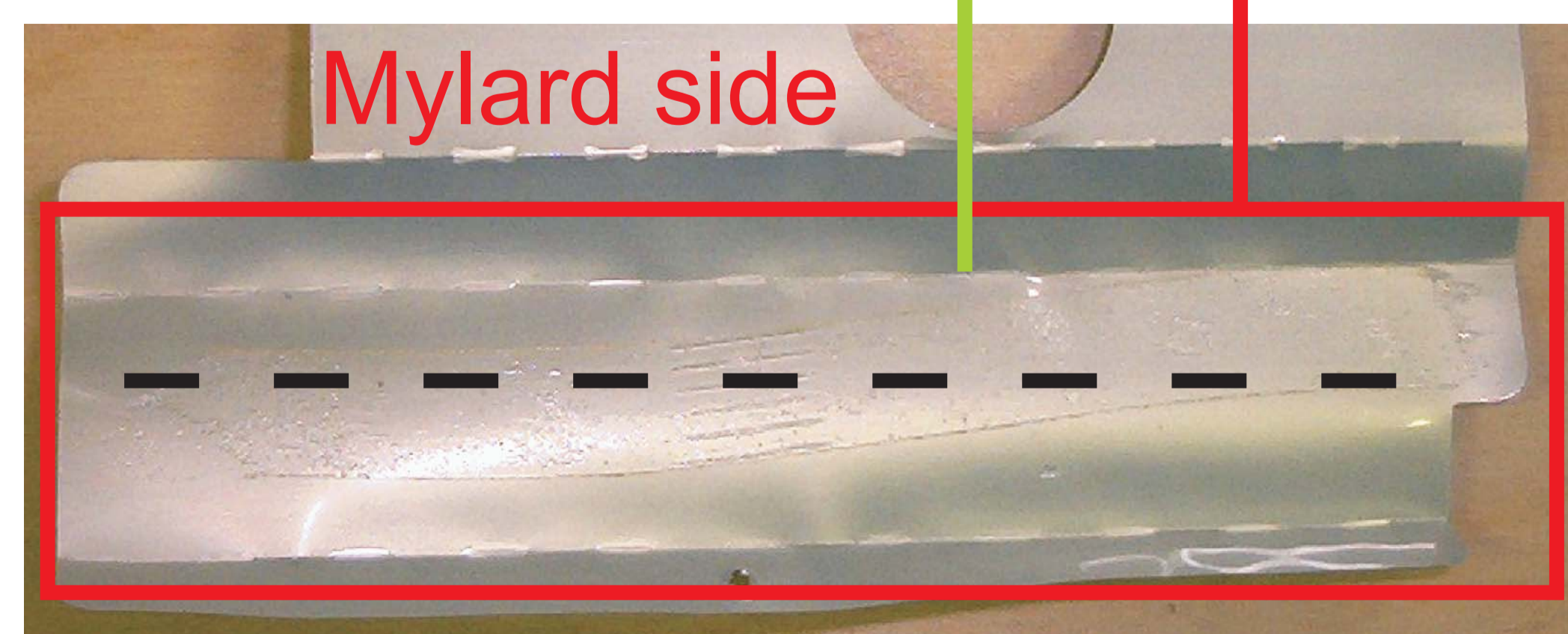


Alluminium side

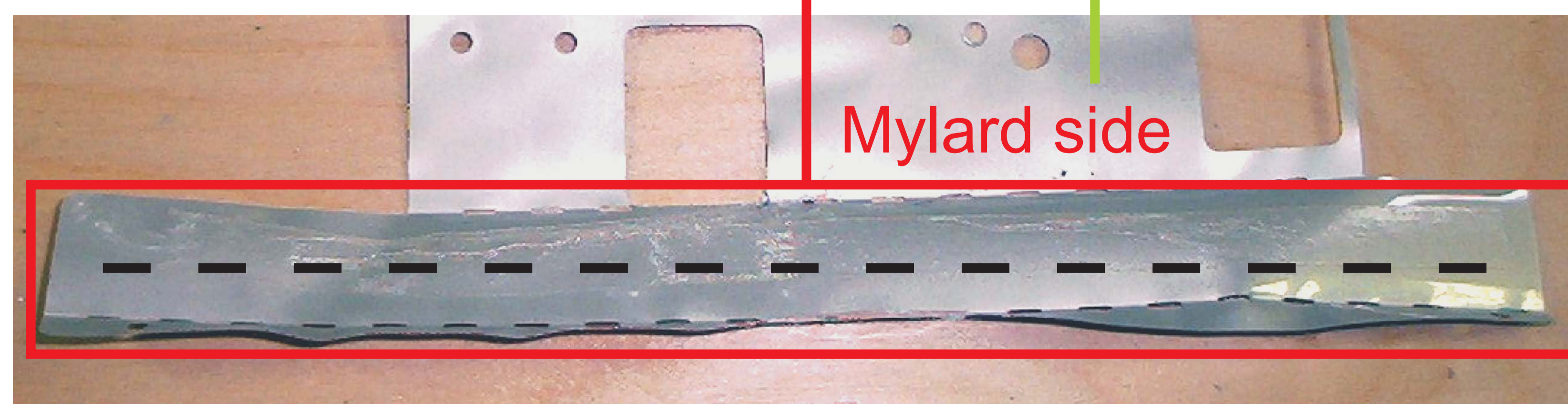
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FEL0001109

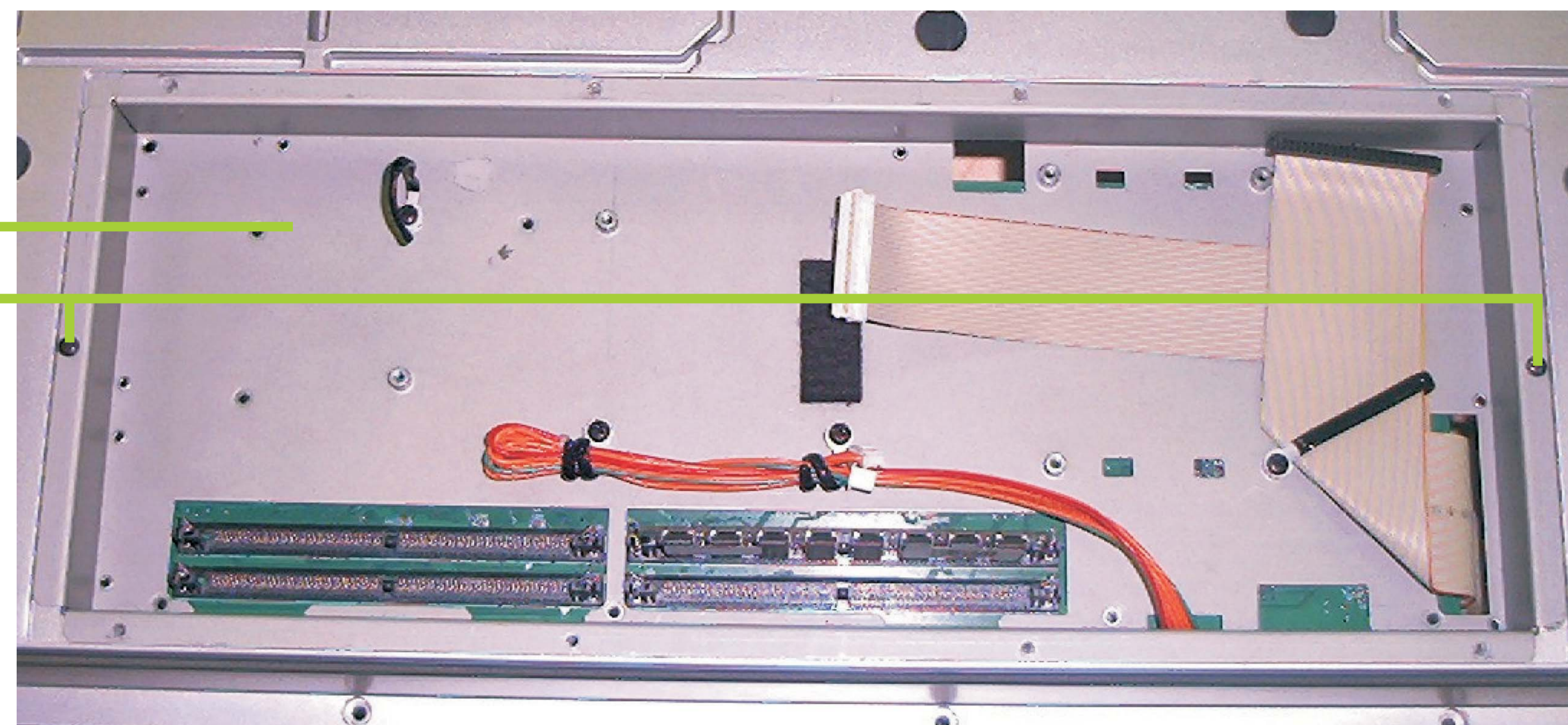
--- = FEL0001056



Mylard side

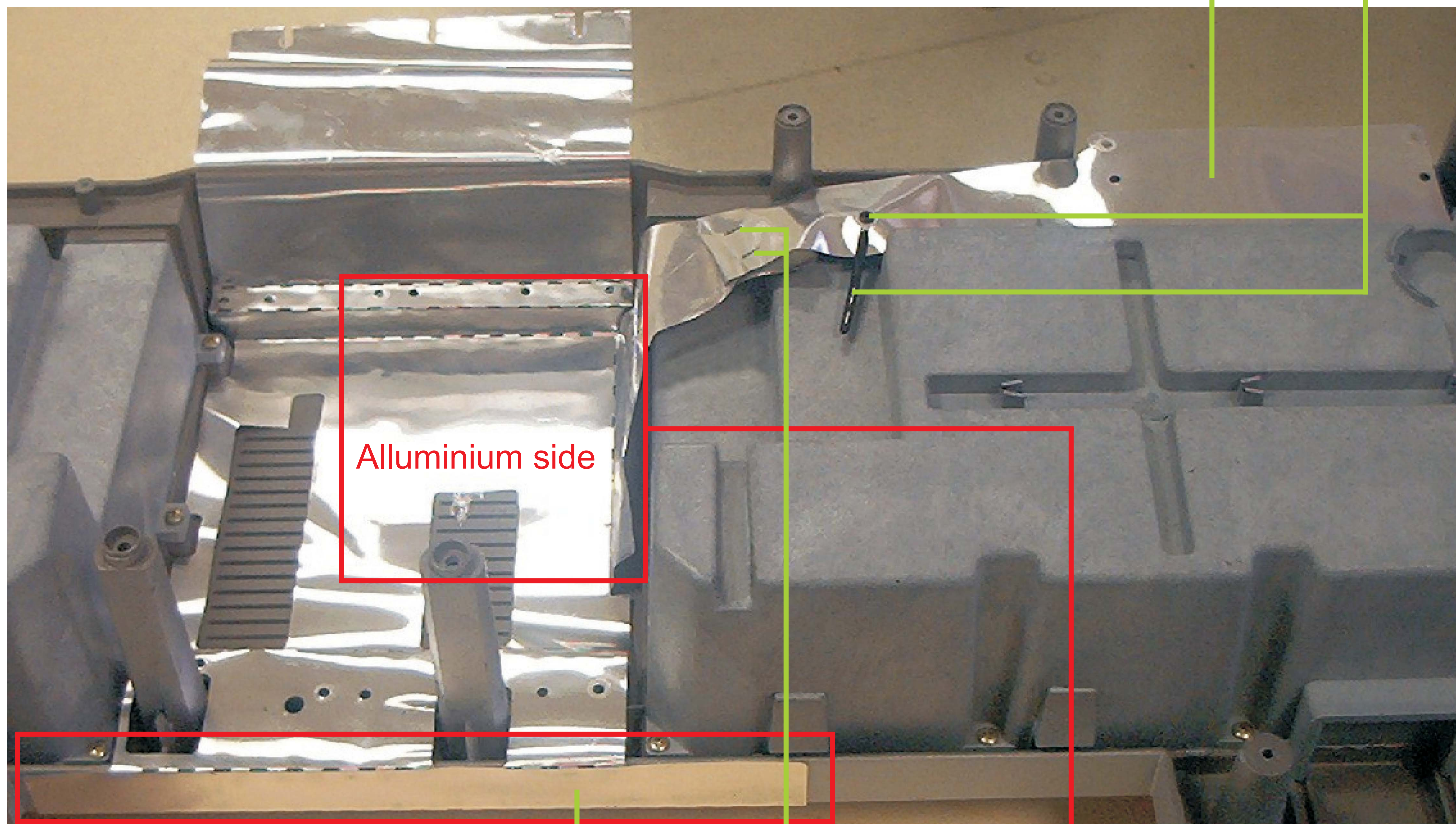


Mylard side



FEL0001110

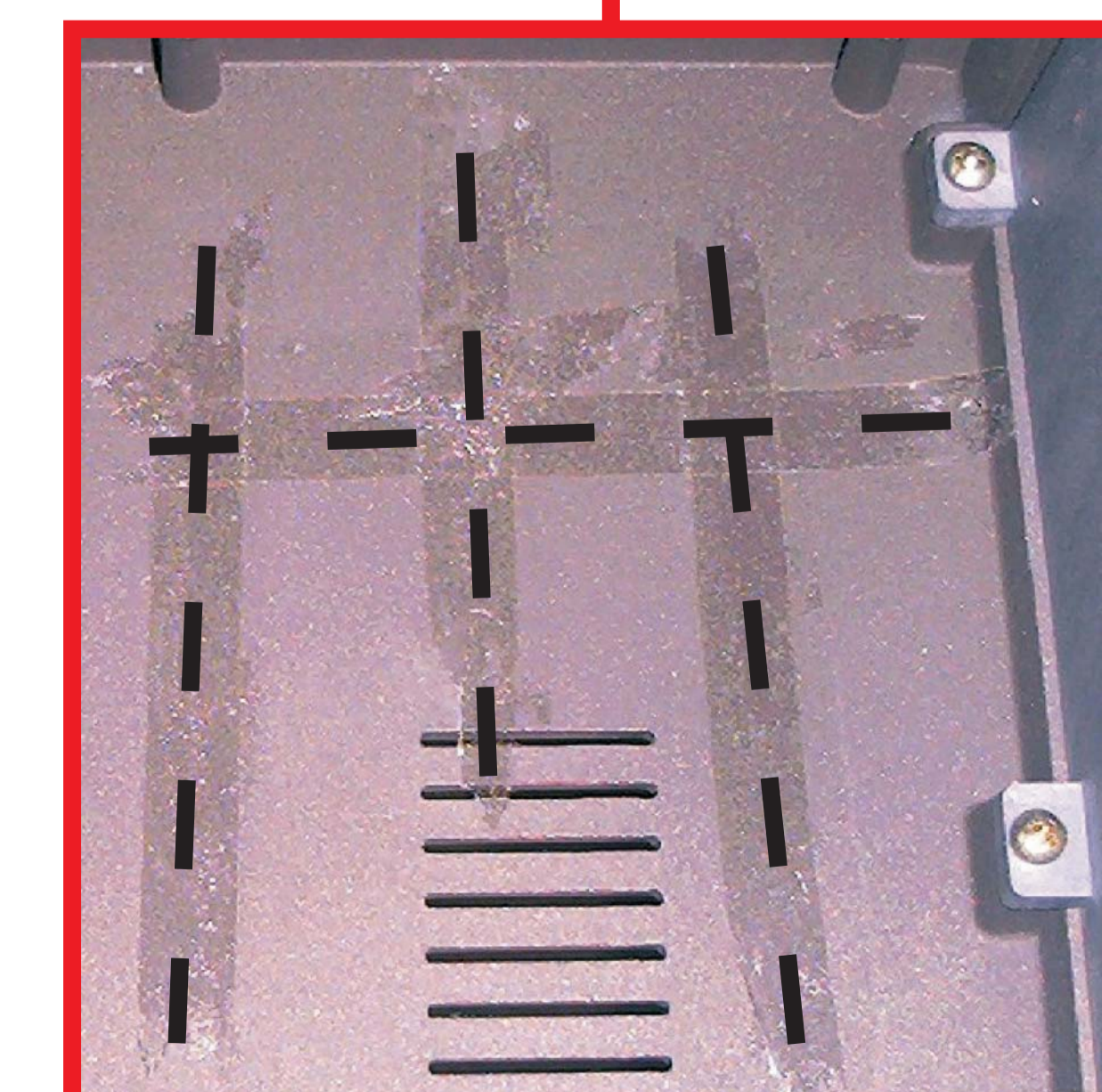
VTA0001051
PLA0001046



Alluminium side

FEL0001110

Staples

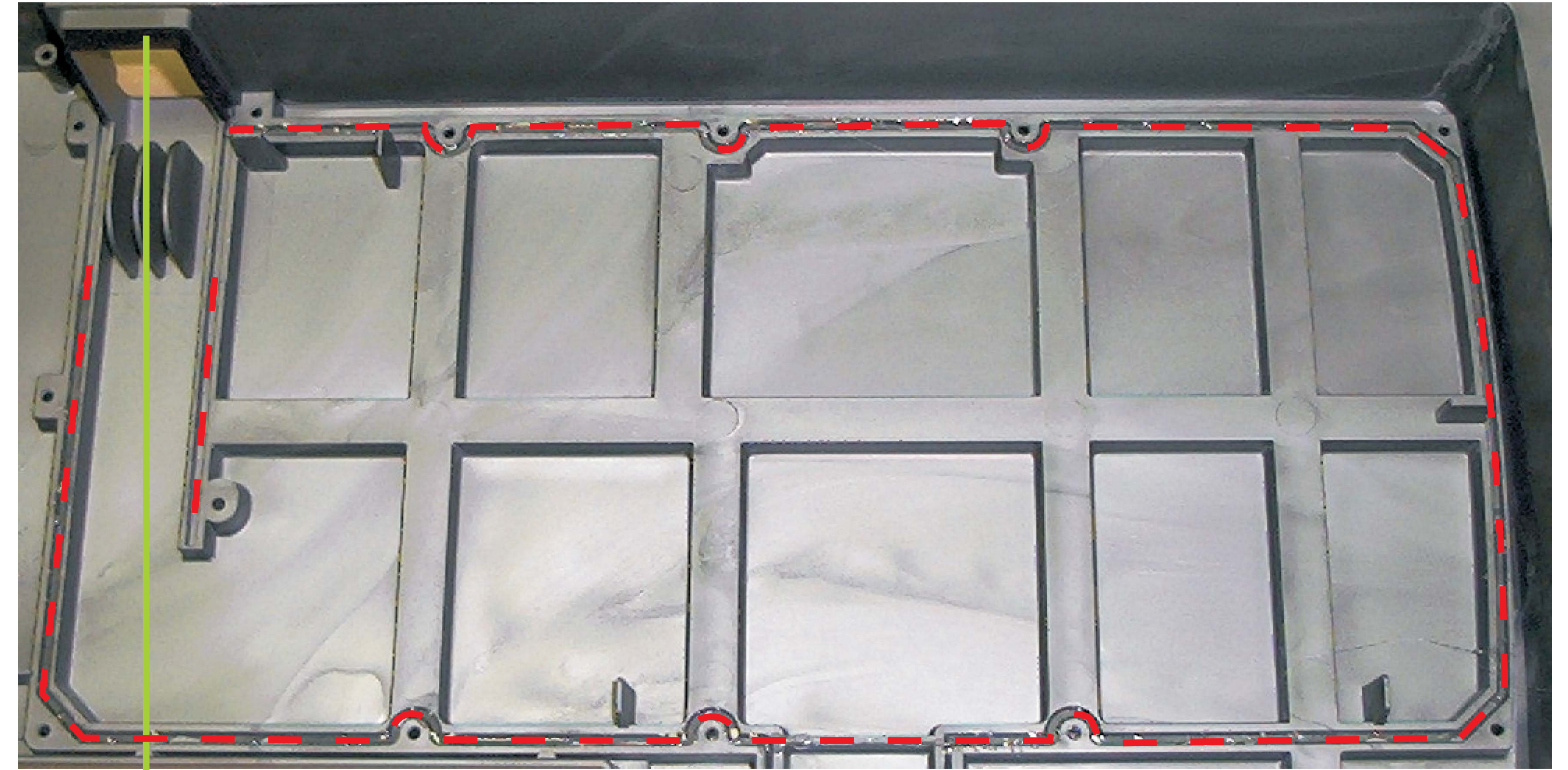


Lower case 6



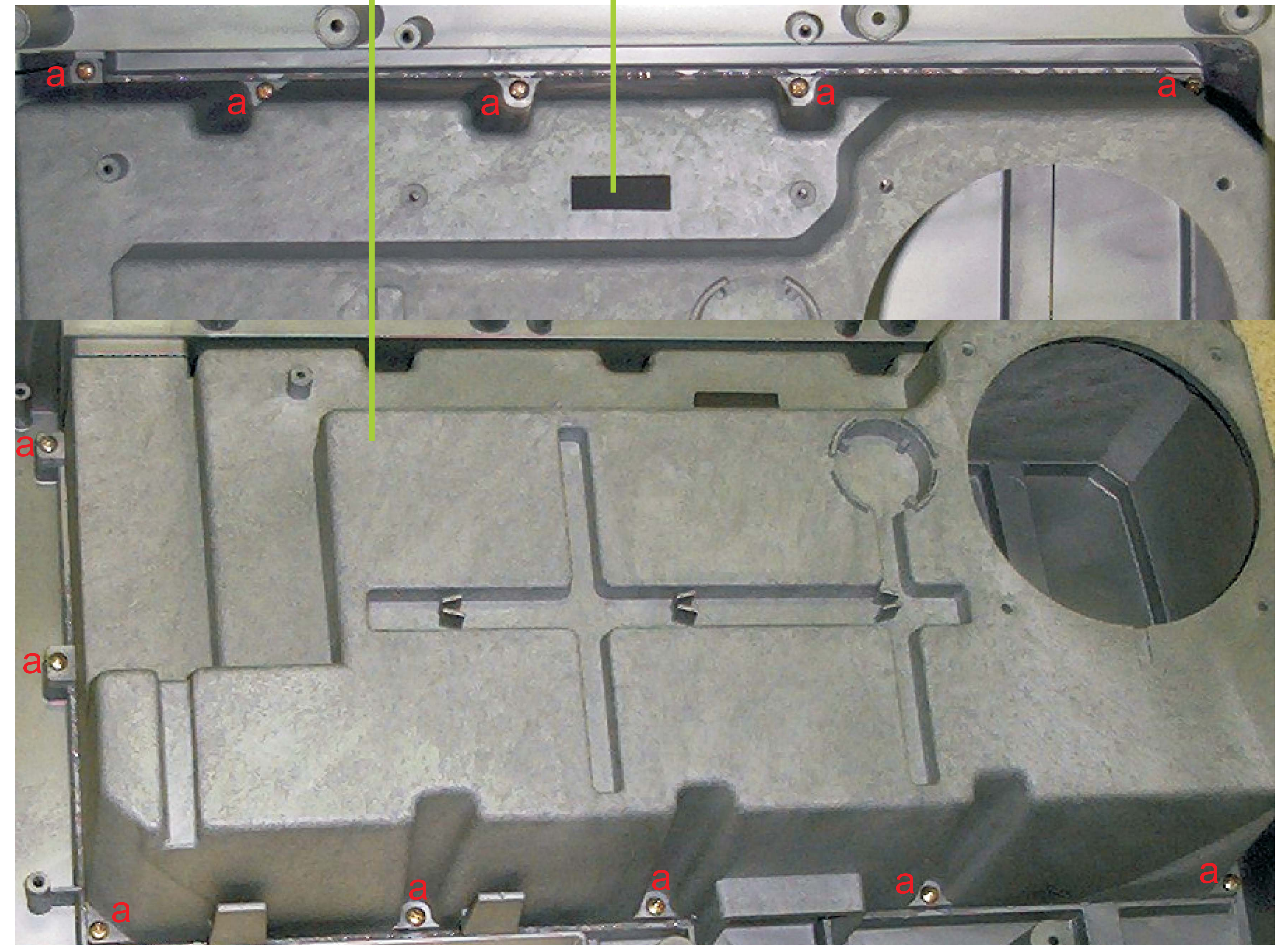
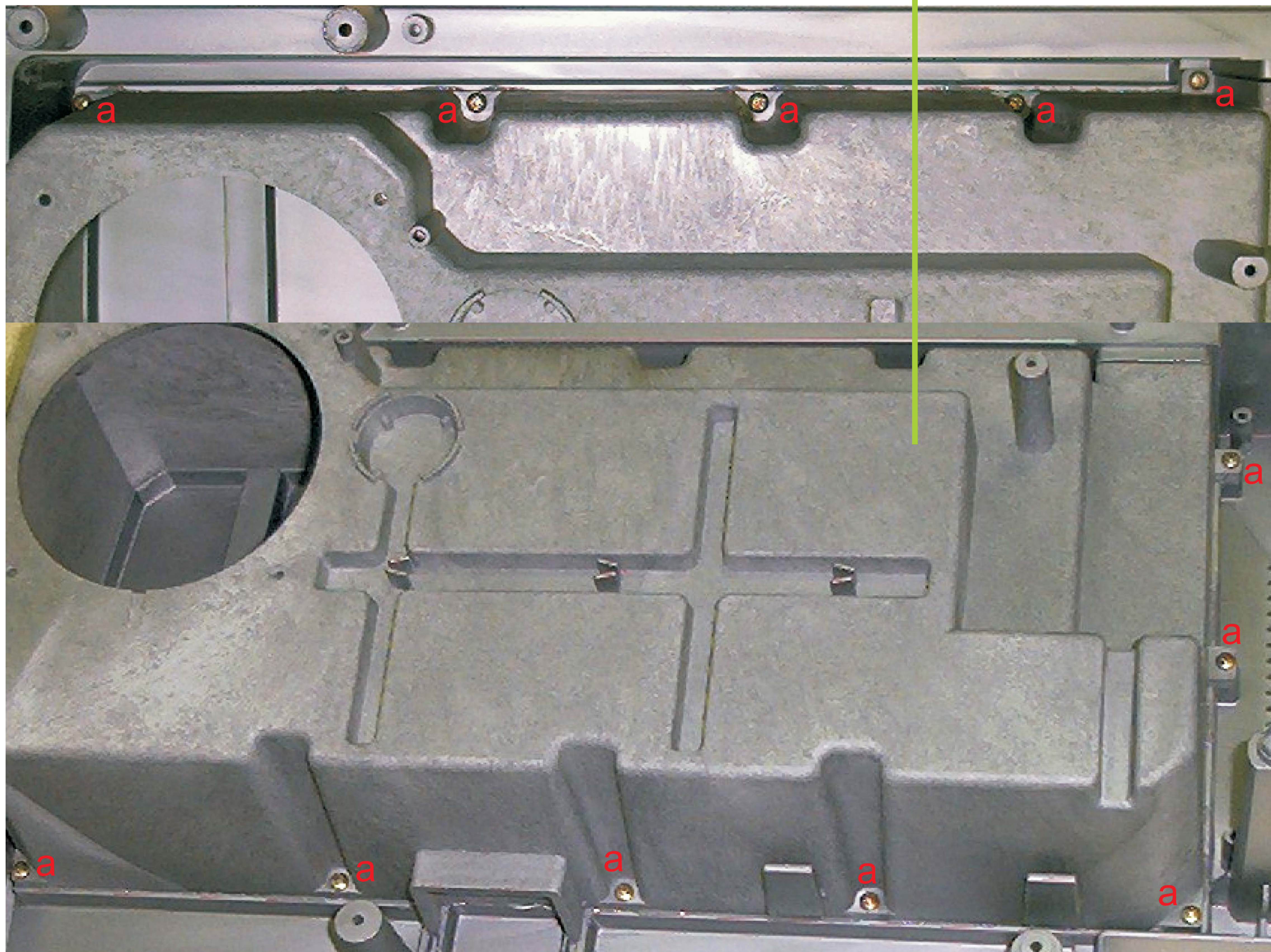
--- = plastic glue

PLA0002054 PLA0001160 FEL0001087

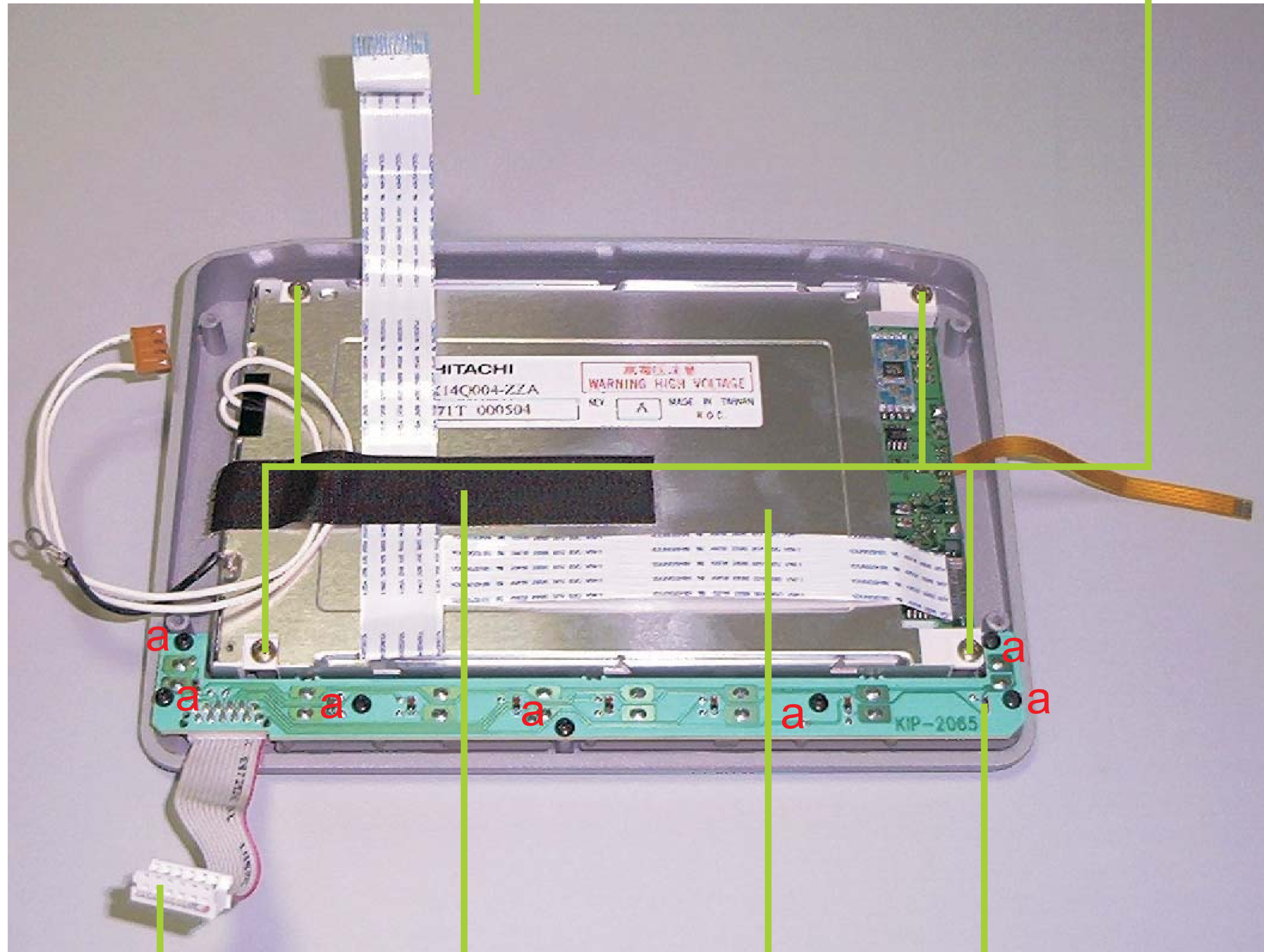


FEL0001087 PLA0001159 FEL0001040

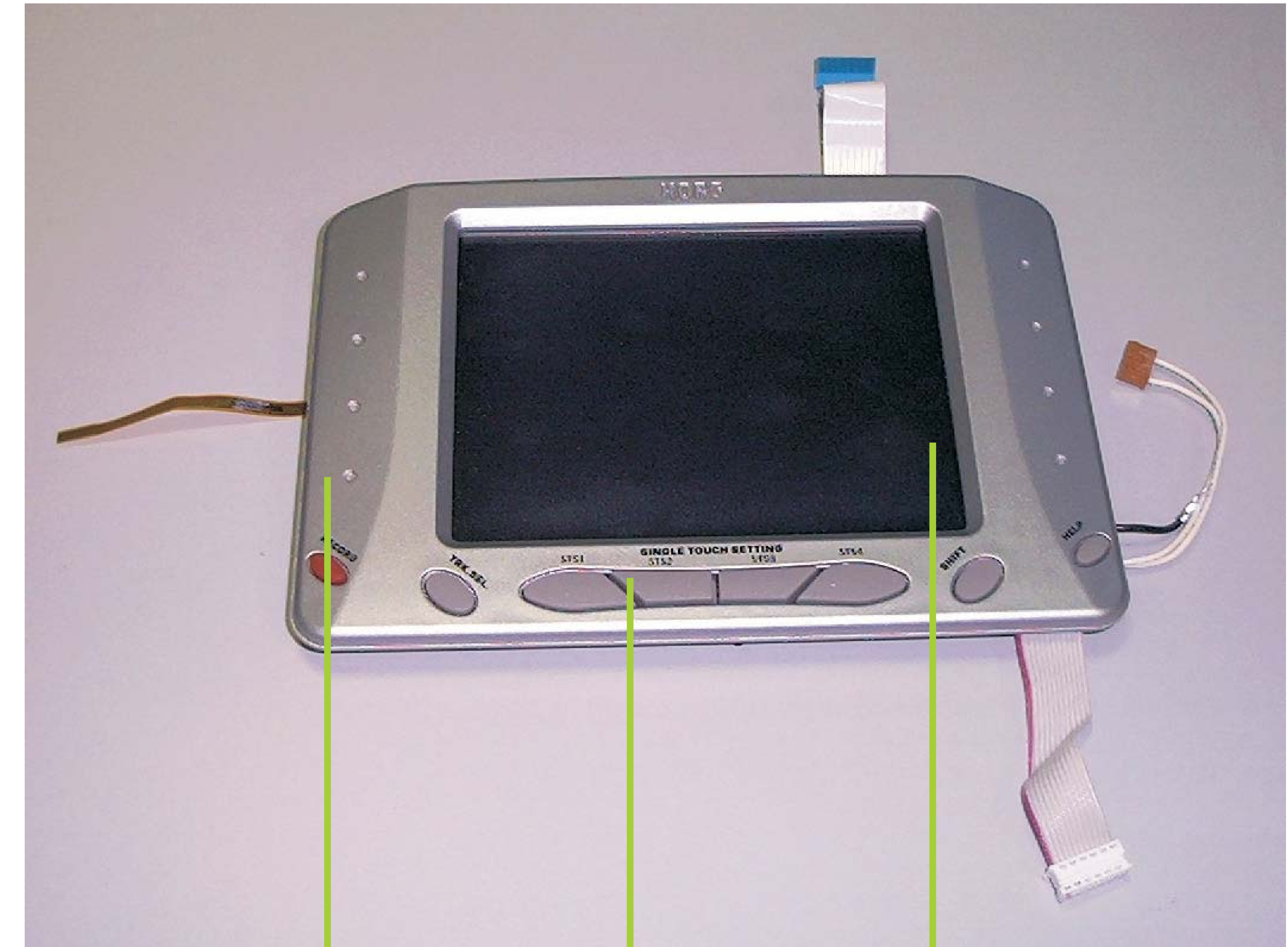
a = n° 24 VTA0001067



Unscrew n°7 screws marked (a) VTA0001049 VTA0001038



RIL0001202 FEL0001029 FDD0001018 GRA0002065

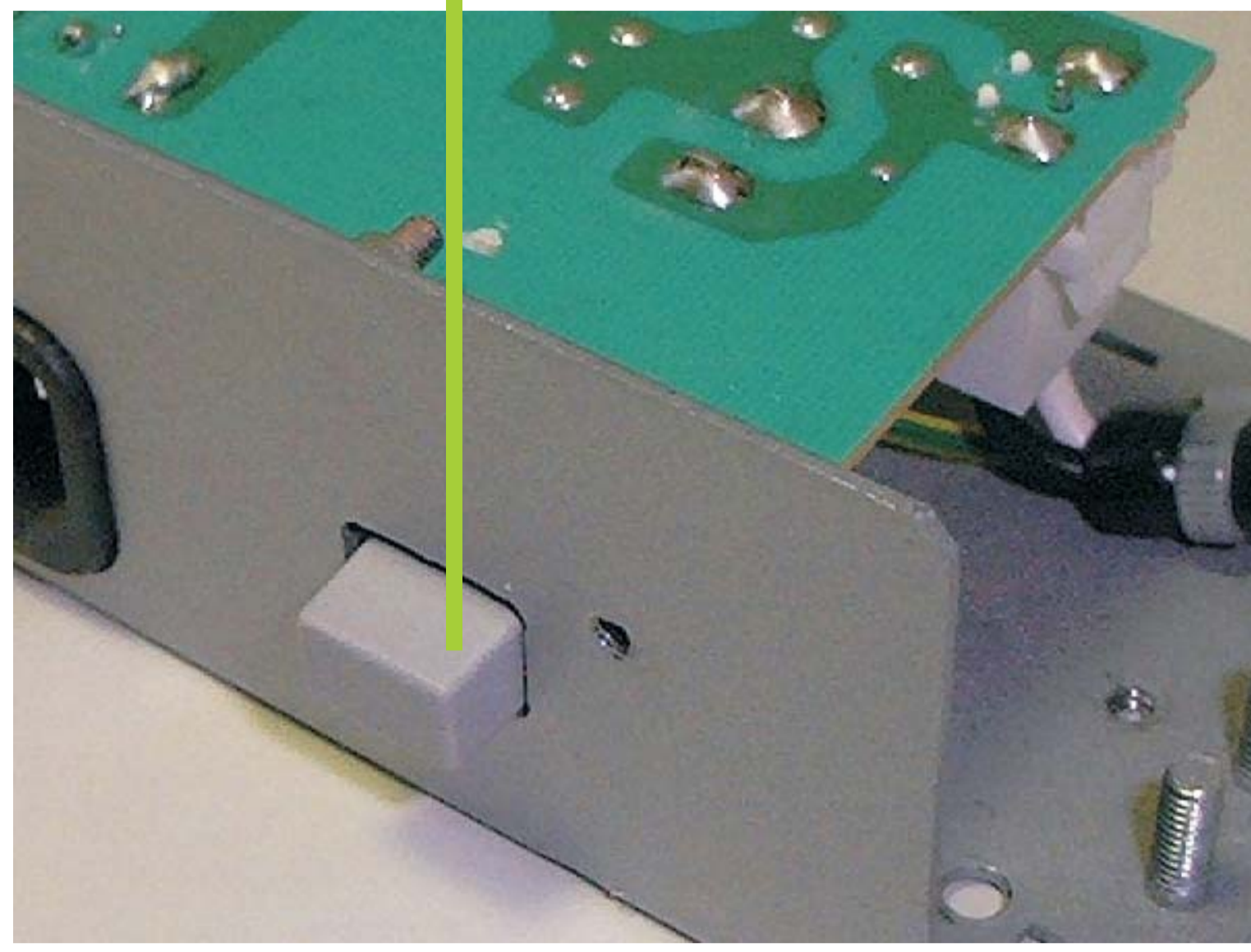


PLA0002056

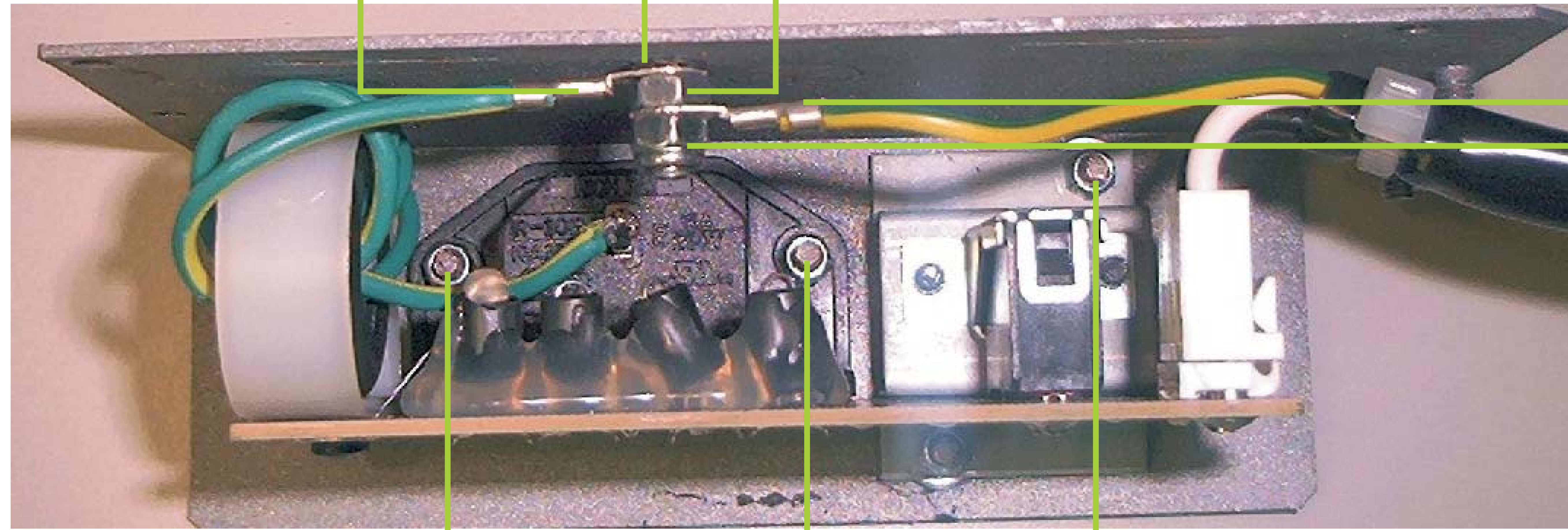
PLA0001132

FDD0001018

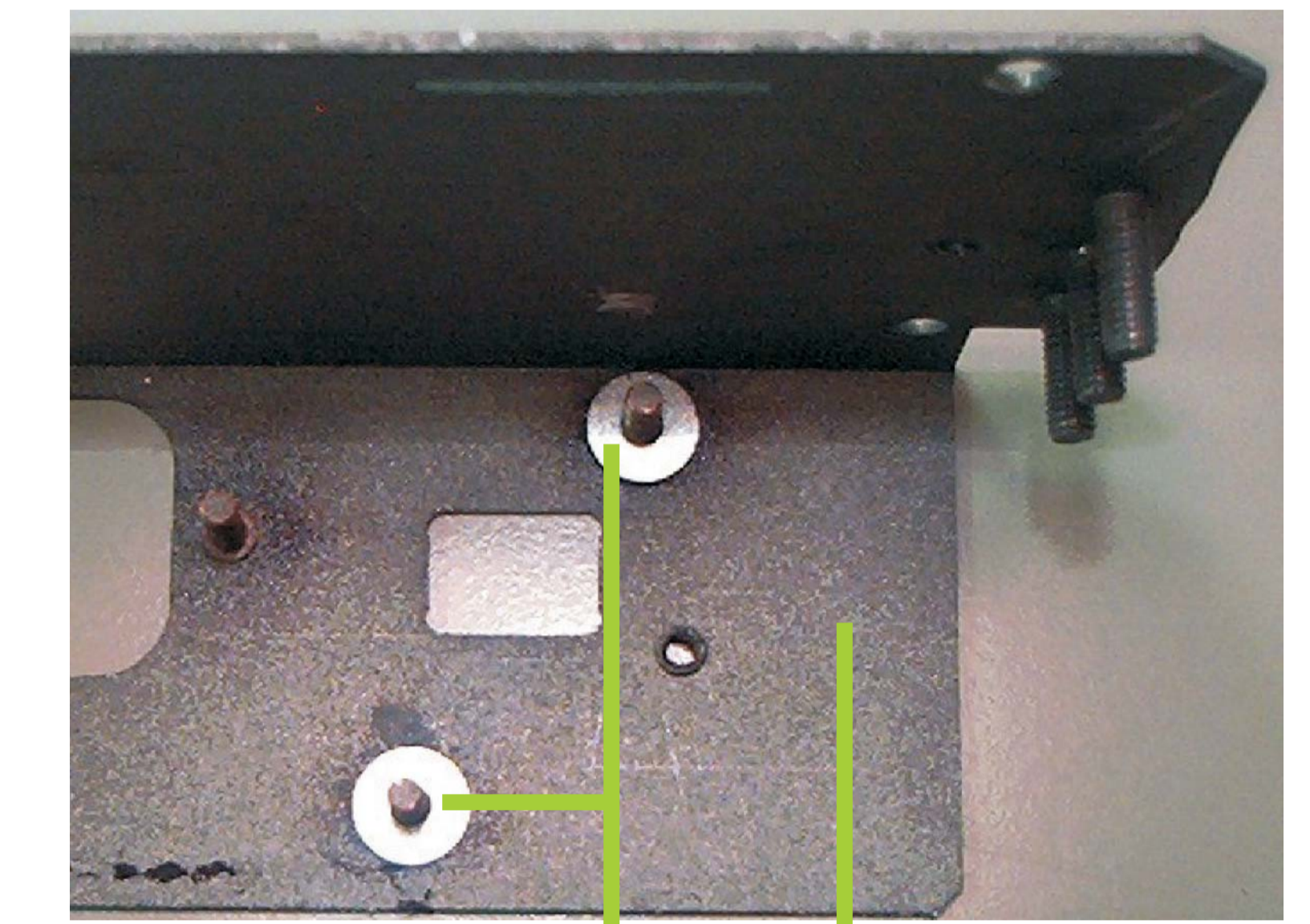
PLA0001157



GRA1002074 VTA0001011 VTA0001028



RIL0001263
VTA0001045

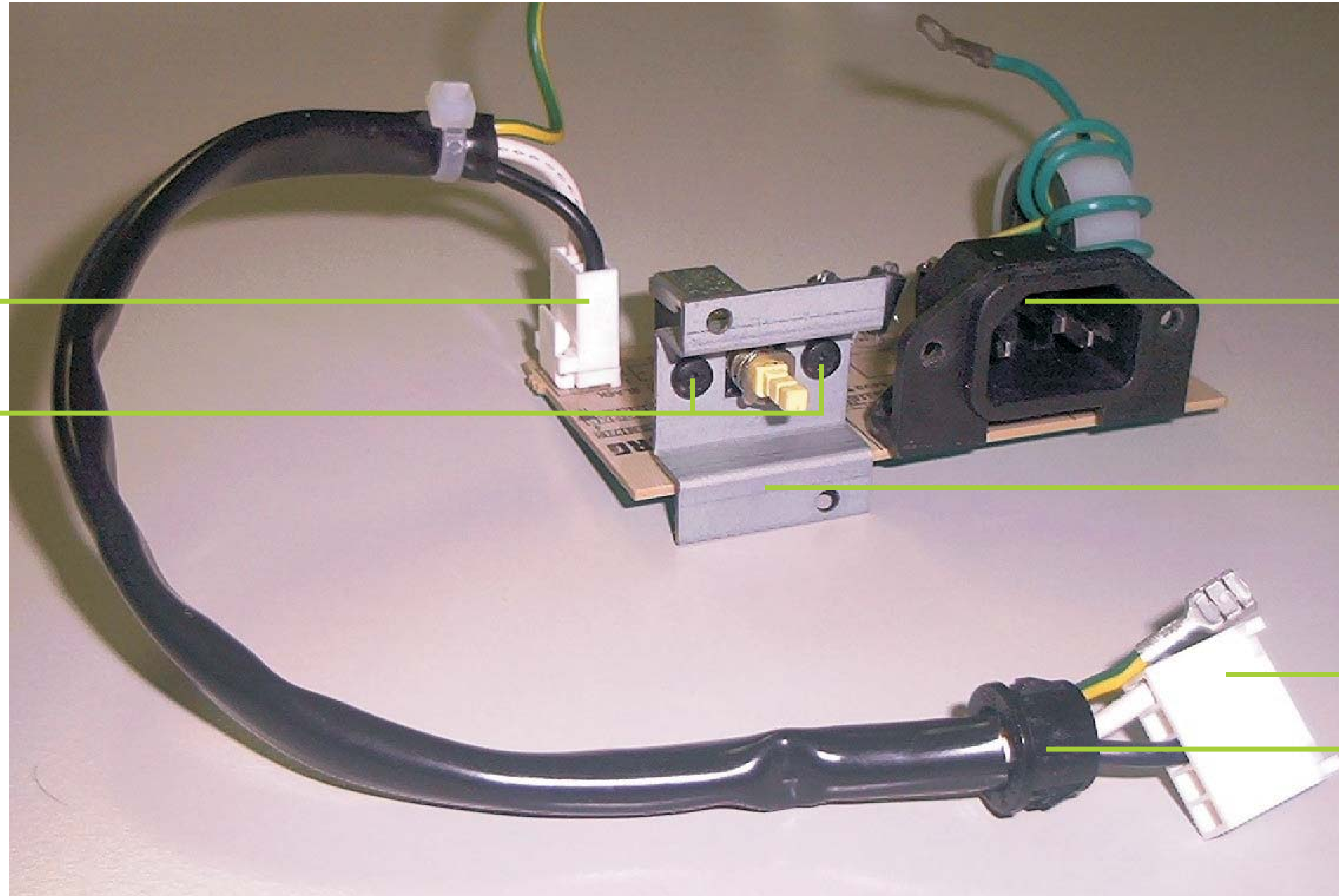


VTA0001048
FER0002059

VTA0001023

RIL0001263

VTA0001031



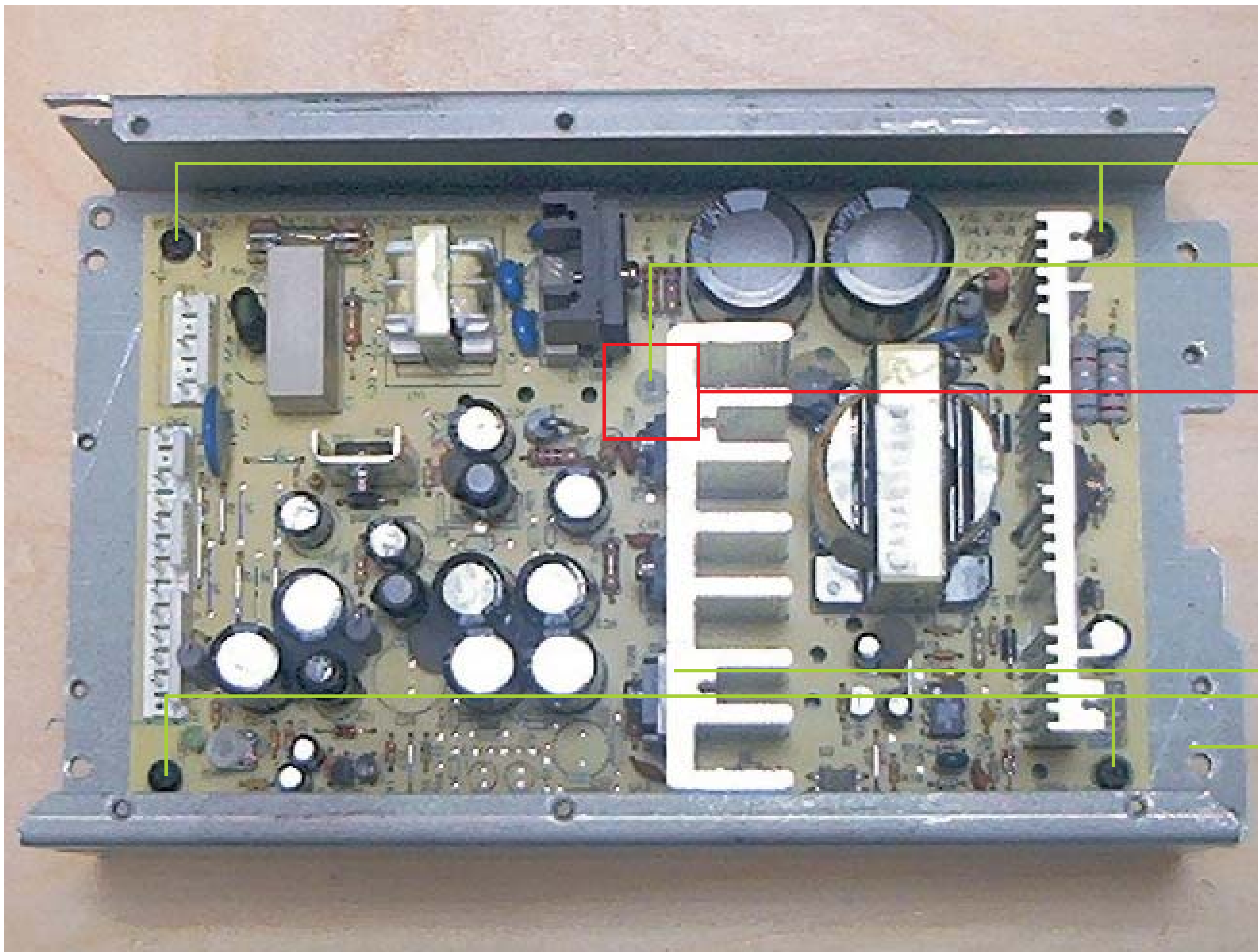
GRA1002074

FER0001210

RIL0001263

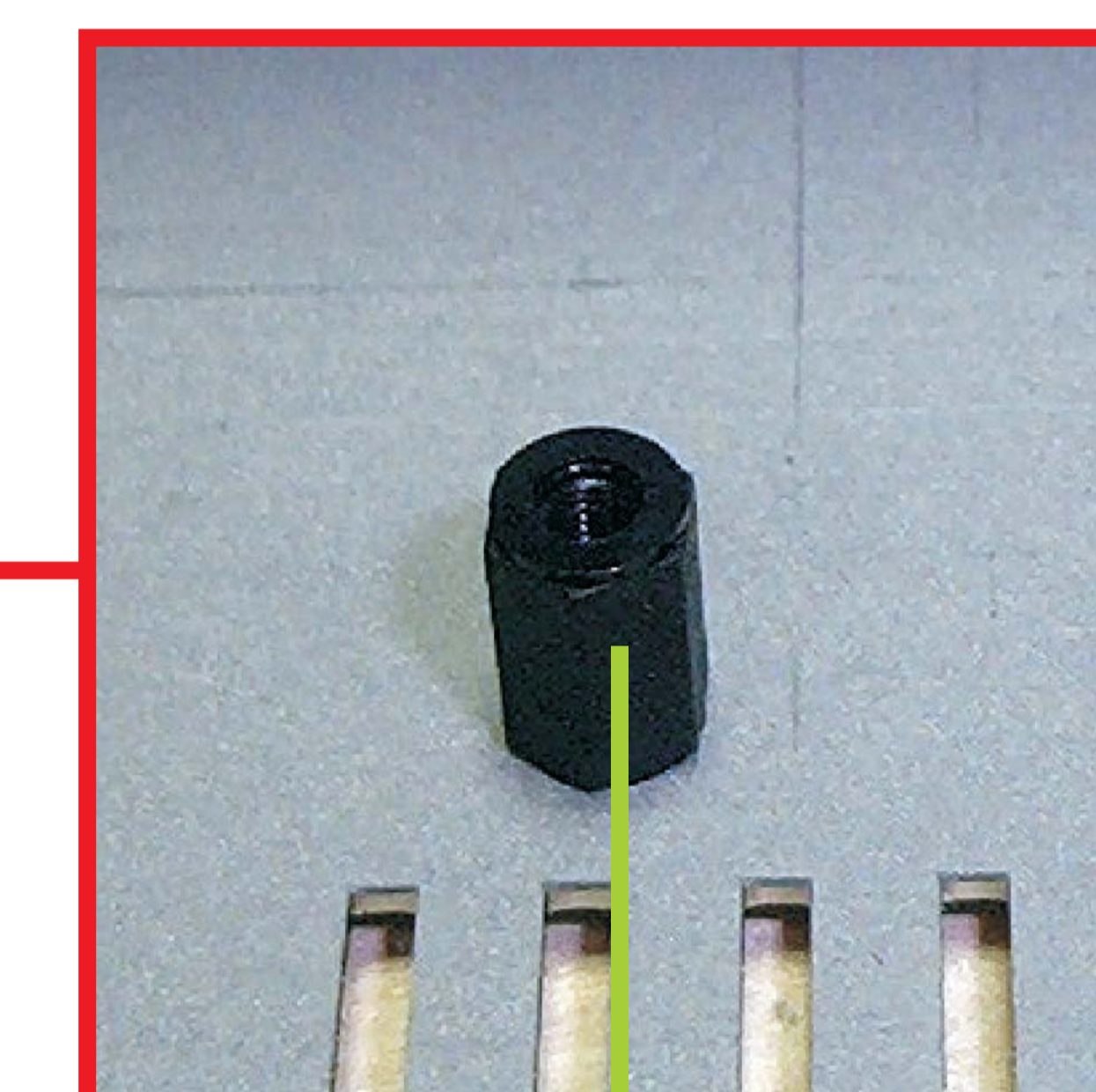
PLA0001171

Main filter group



VTA0001032

PLA0001170



PLA0001169
fixed by
PLA0001170

TRA0004004

VTA0001032

FER0001178

Switching group

FER0001207

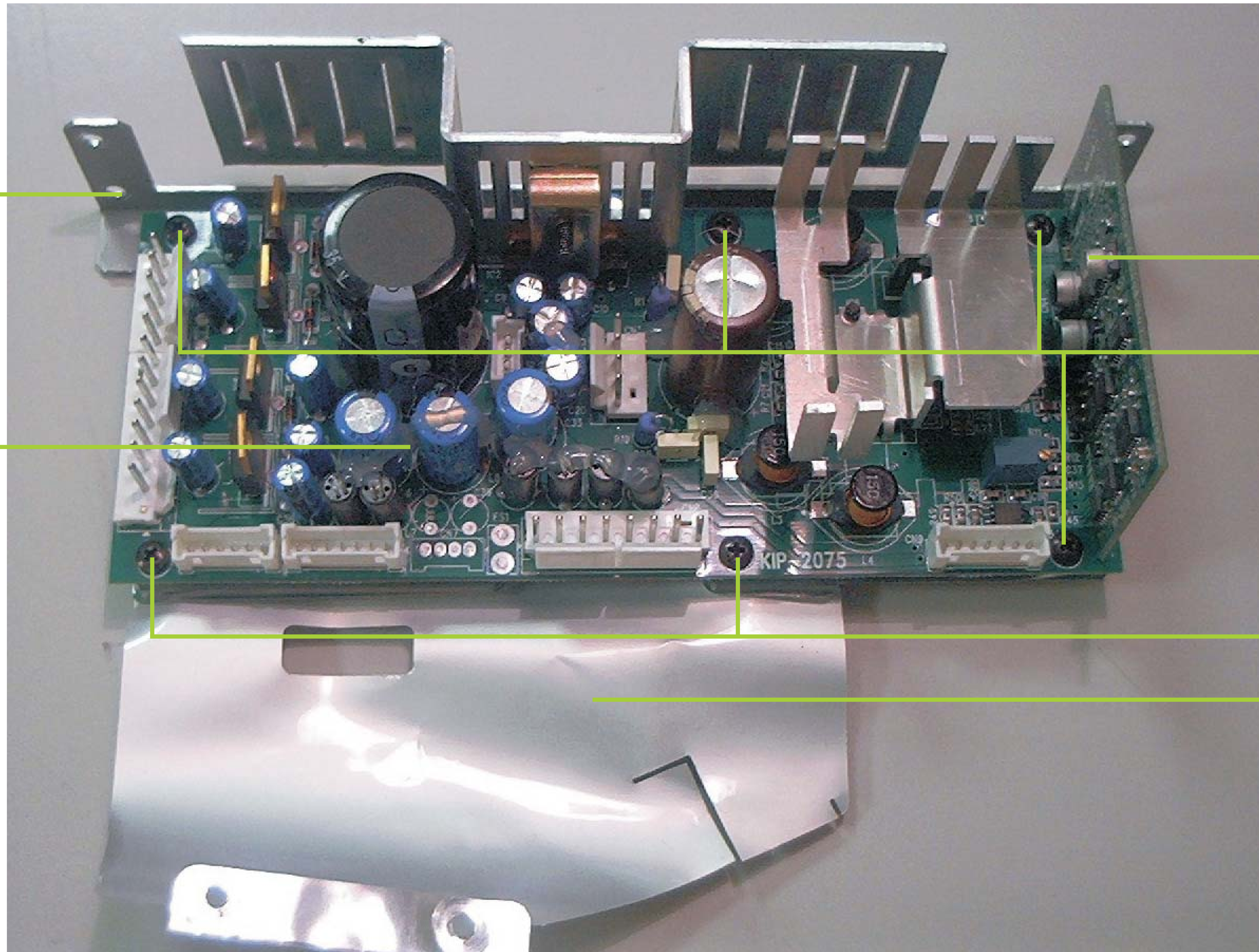
GRA0002075

GRA0002076

VTA0001031

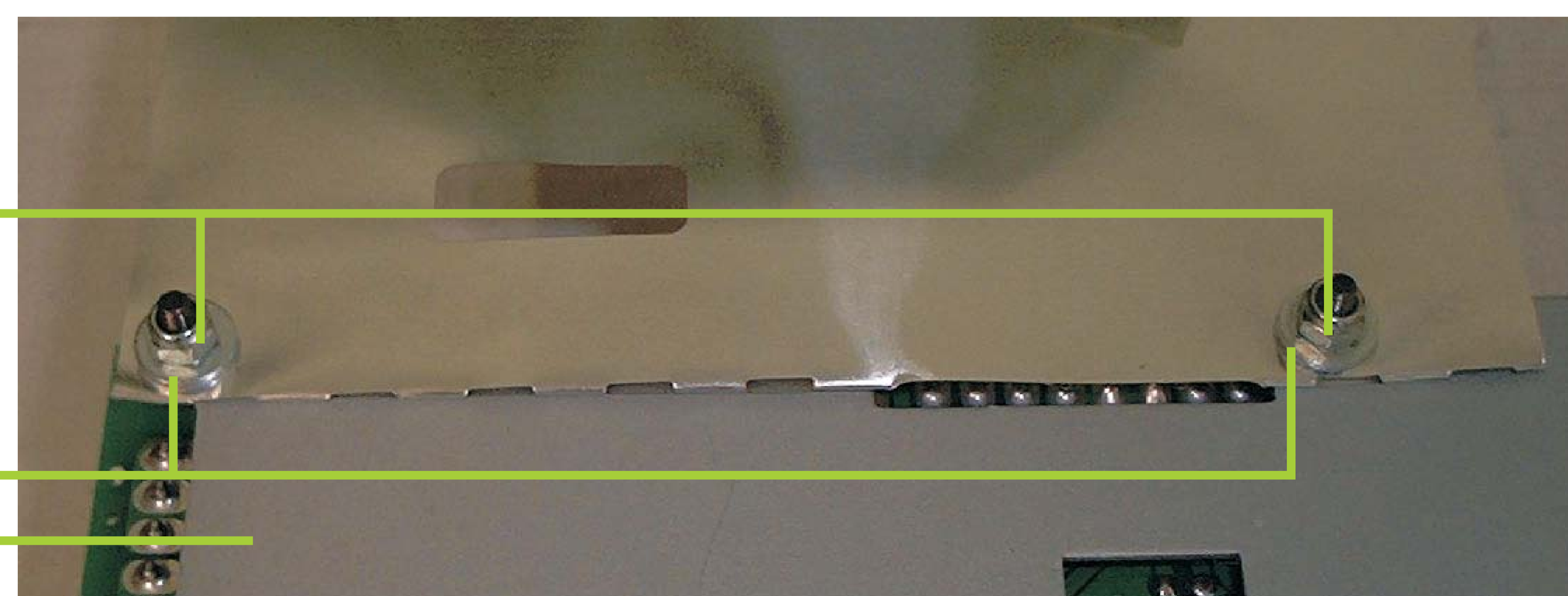
VTA0001006

FEL0001111



VTA0001023

VTA0001023
FER0001207



Amplifier group

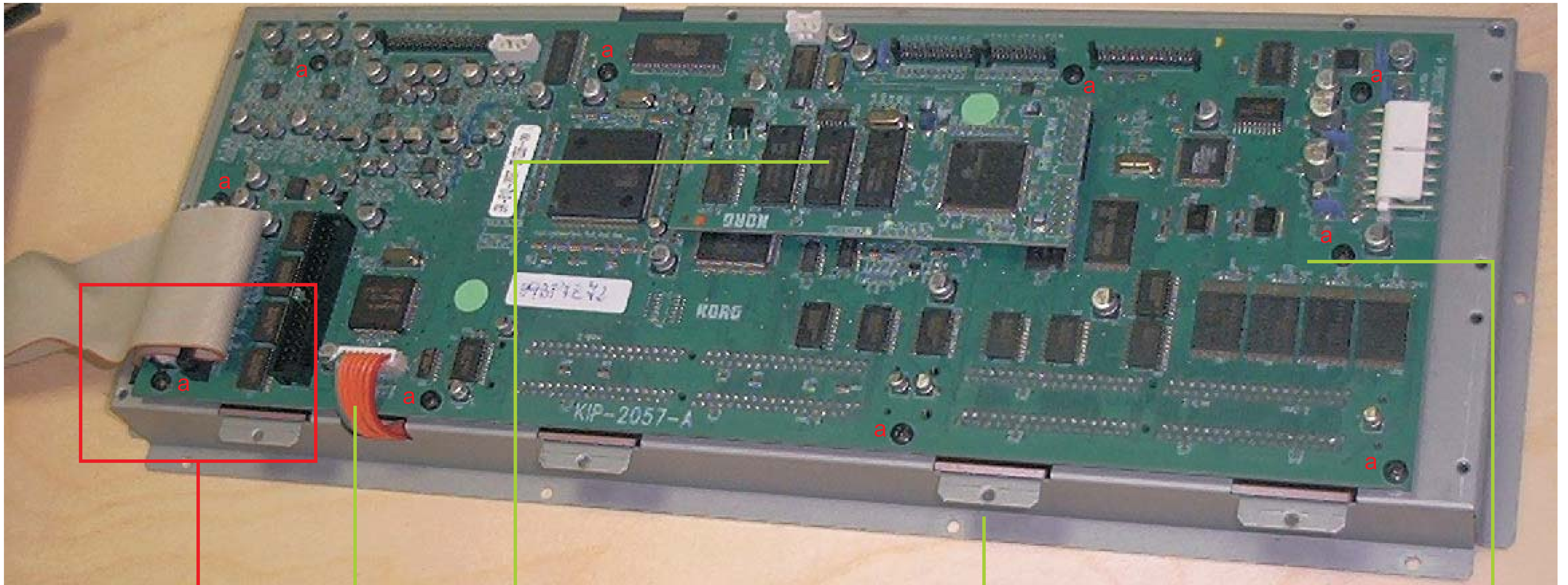
FER0001182

GRA0002071



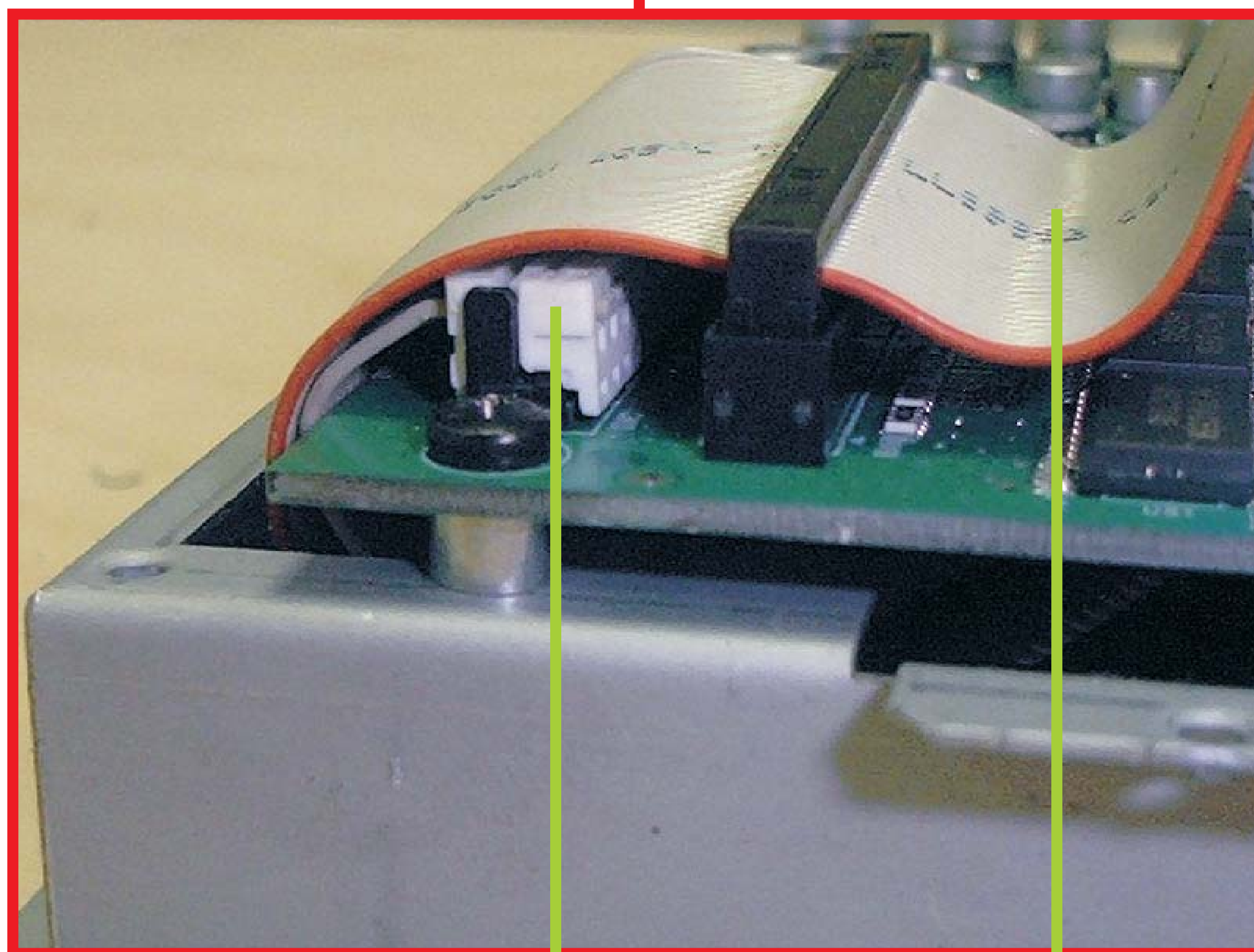
VTA0001085

CDRom group



RIL0001279

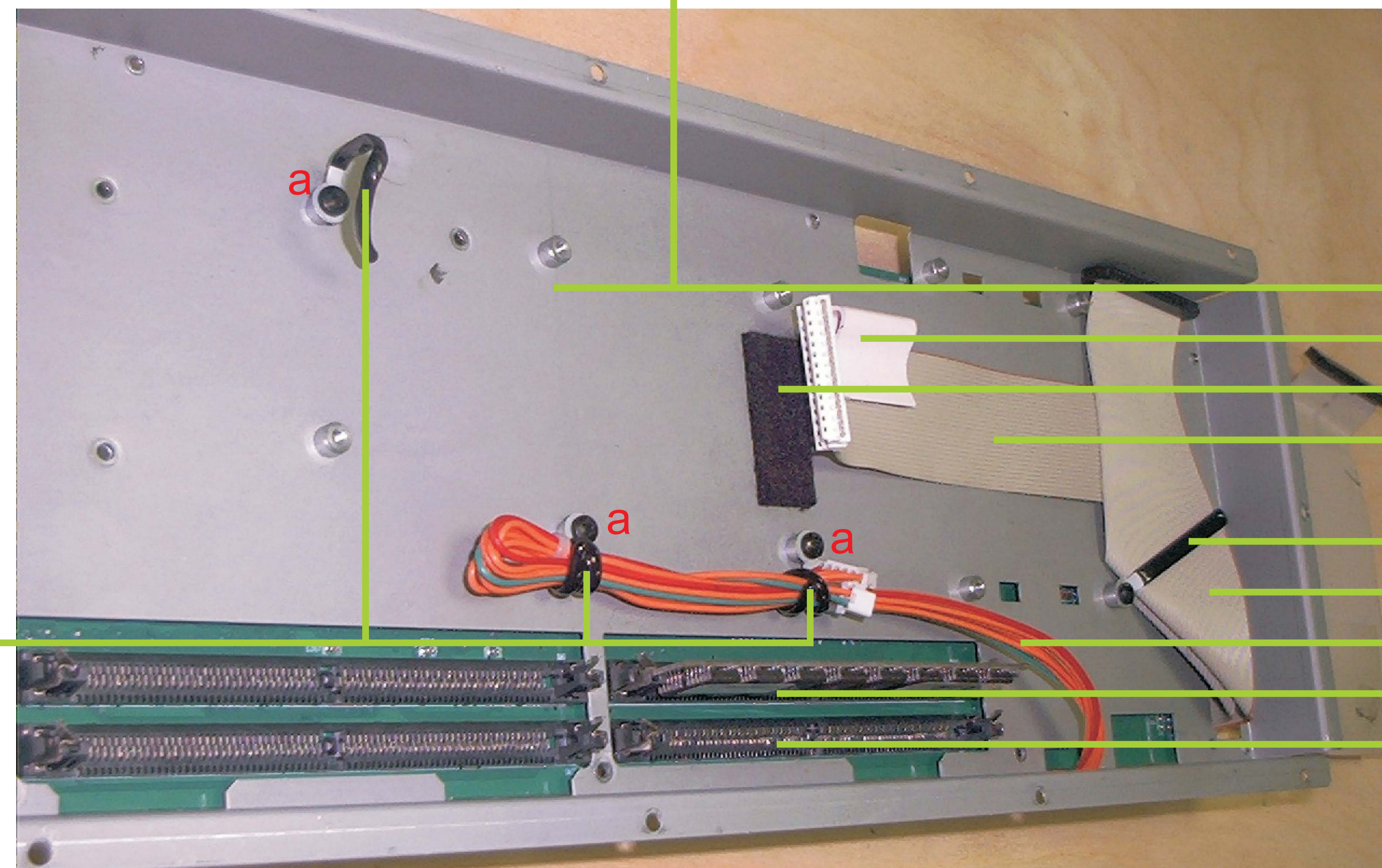
GRA0002080



RIL0001282

RIL0001205

a = n°13 VTA0001031



PLA0001046

- GRA1002057
- FER0001185
- PLA0001130
- FEL0001036
- RIL0001282
- PLA0001047
- RIL0001205
- RIL0001279
- FDD0001017
- GRA1002057

Main board group



FER0001183

FEL0001028

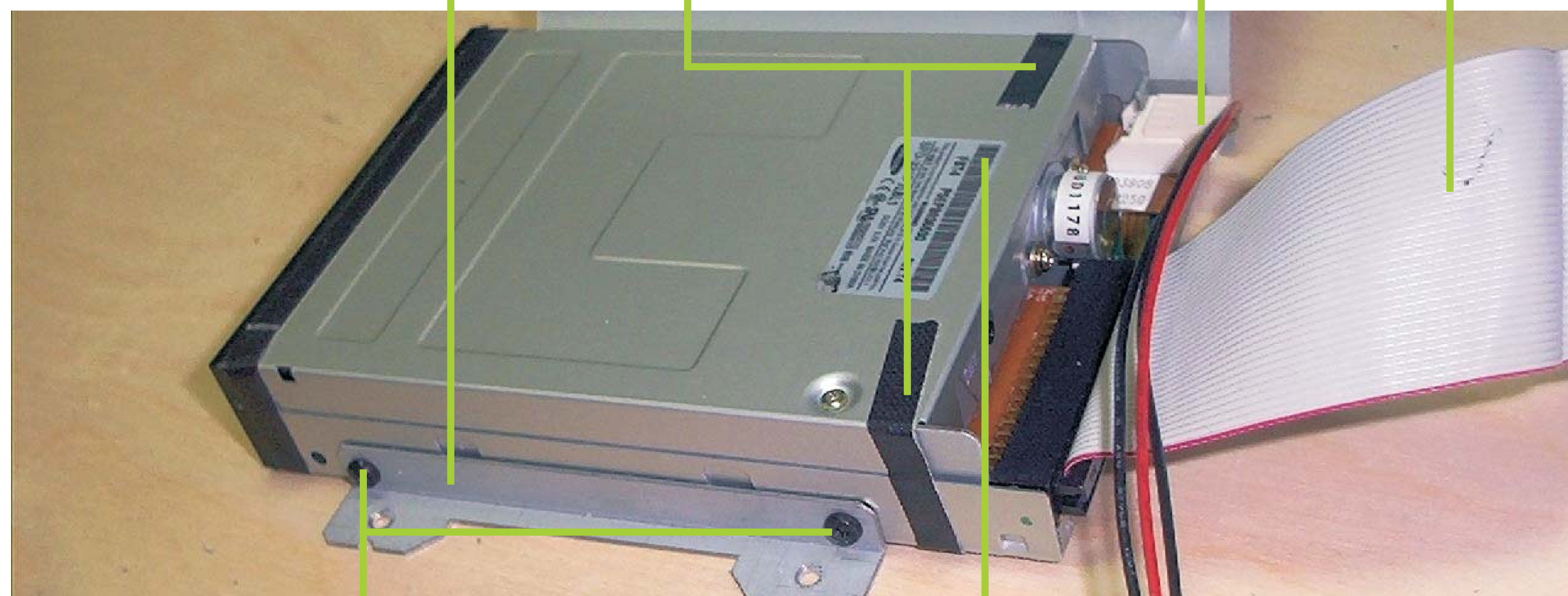
RIL0001264

RIL0001270

FEL0001112

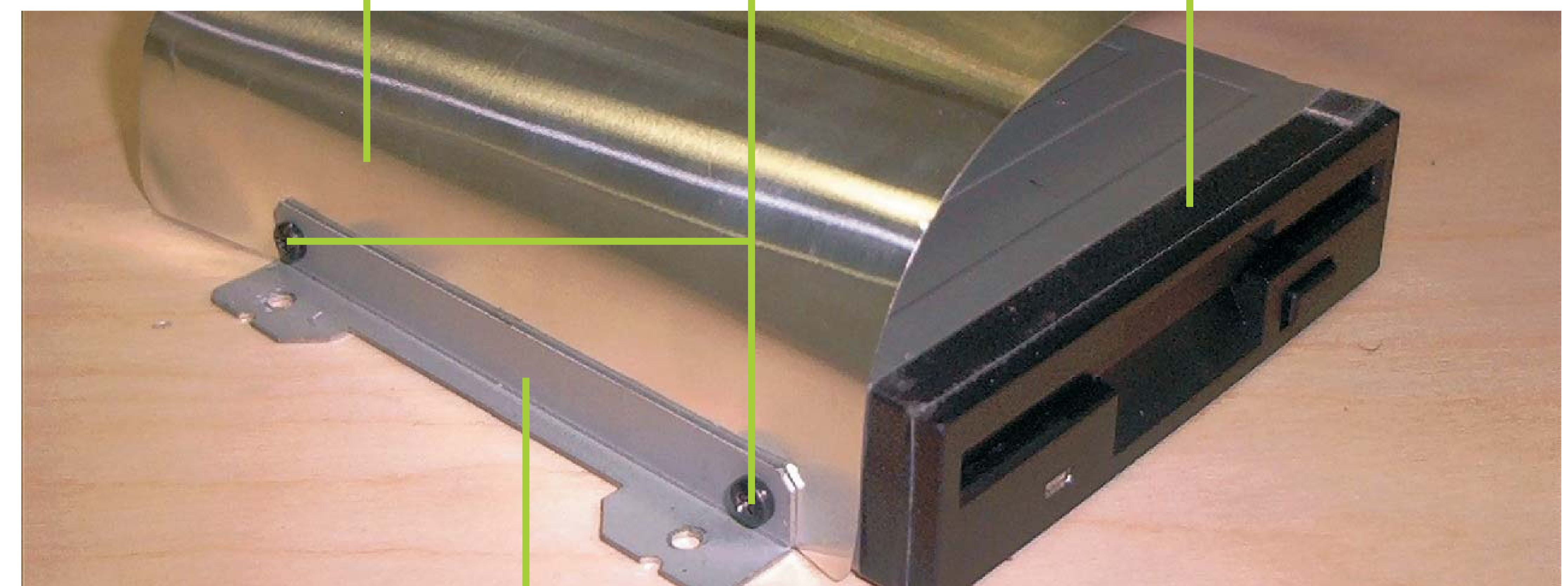
VTA0001031

FEL0001028



VTA0001031

FDD0001001

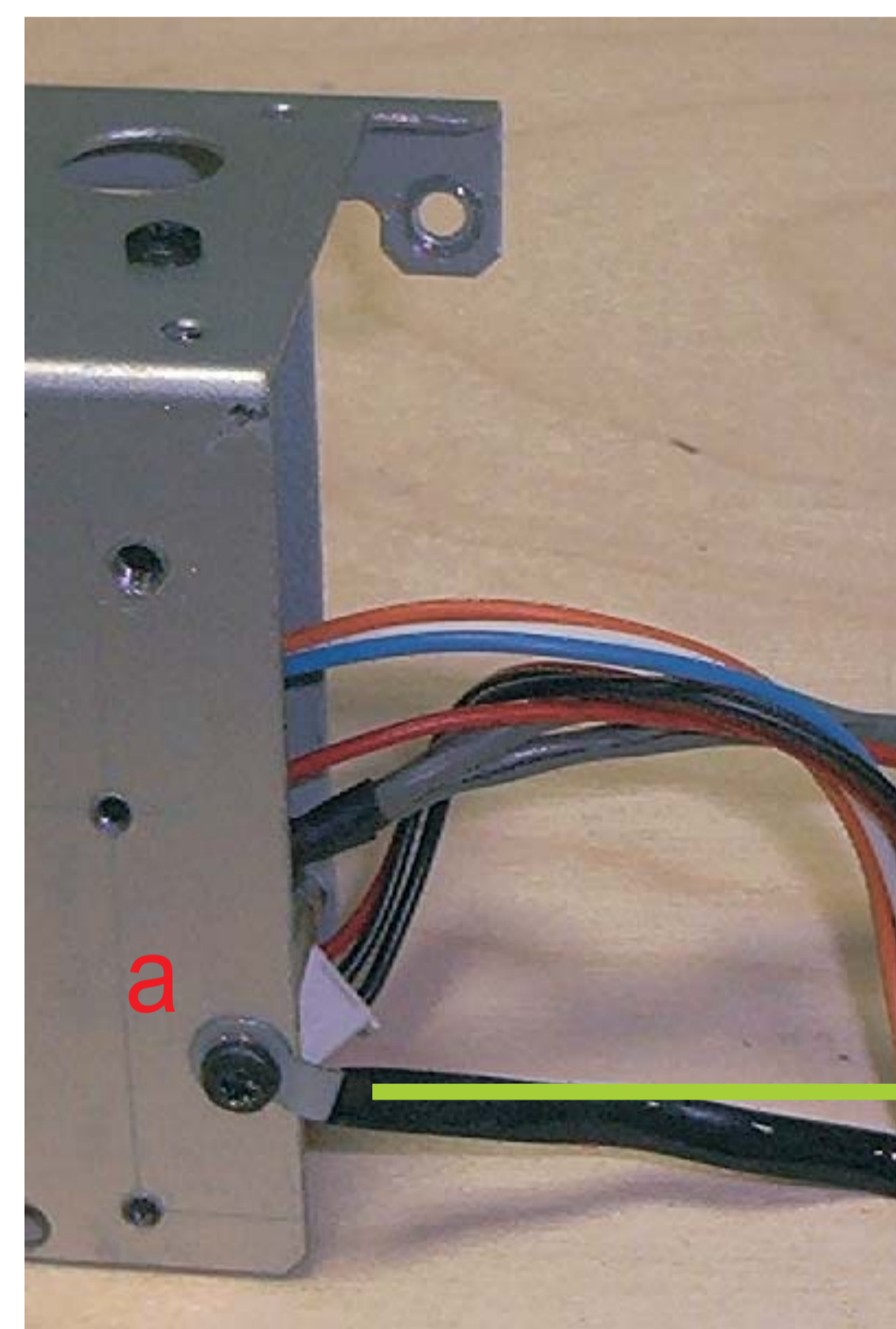
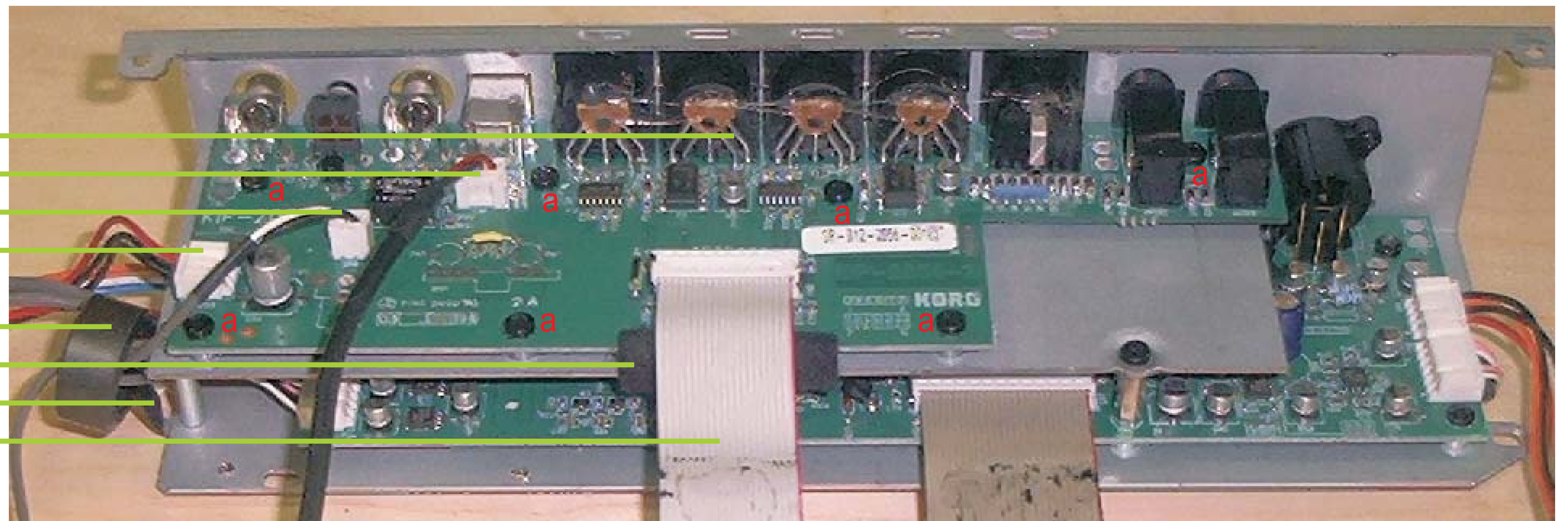


FER0001183

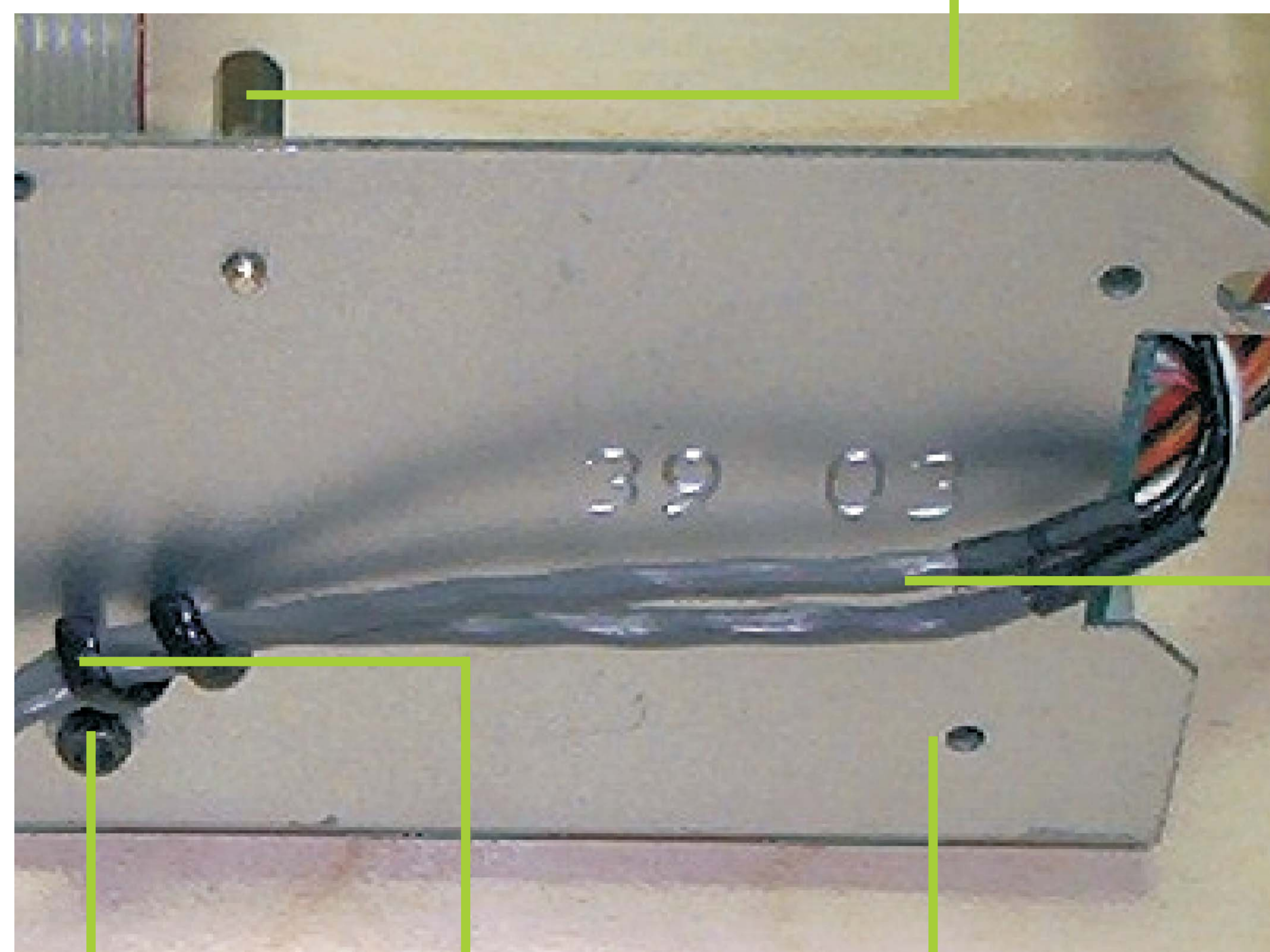
FDD group

a = n°14 VTA0001031
 b = n°5 VTA0001037

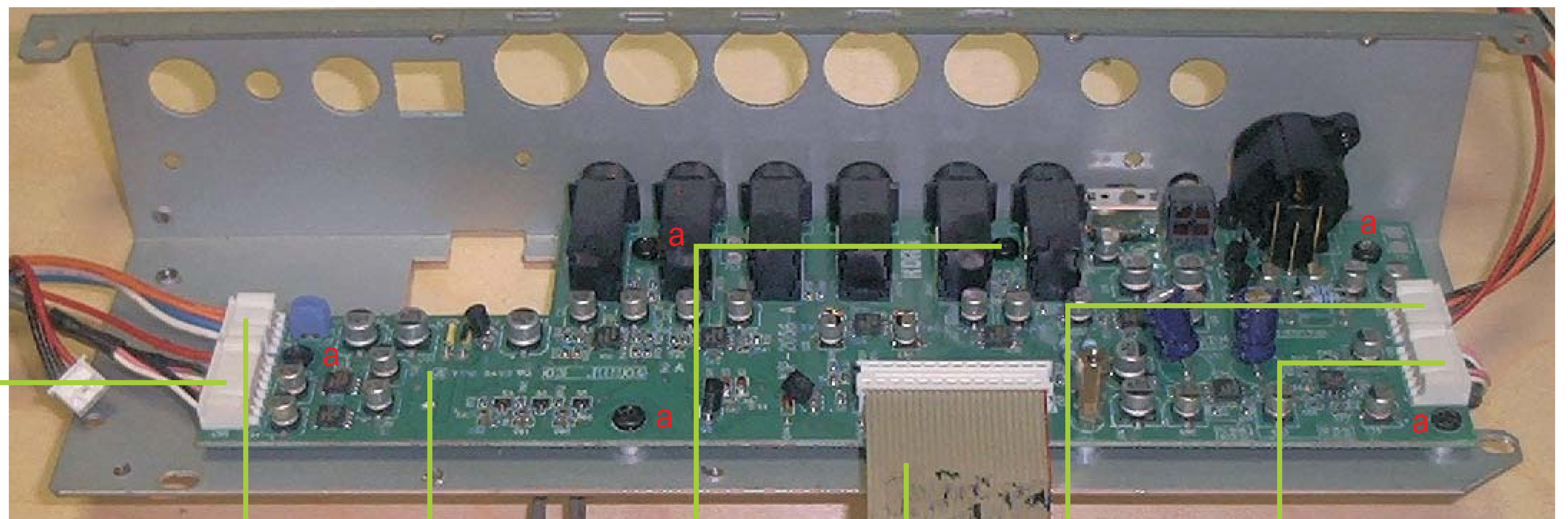
- GRA1002056
- RIL0001269
- RIL0001283
- RIL0001268
- RIL0001283
- FEL0001036
- PLA0001047
- RIL0001272



- FER0001184
- GRA1002056
- PLA0001047
- VTA0001096

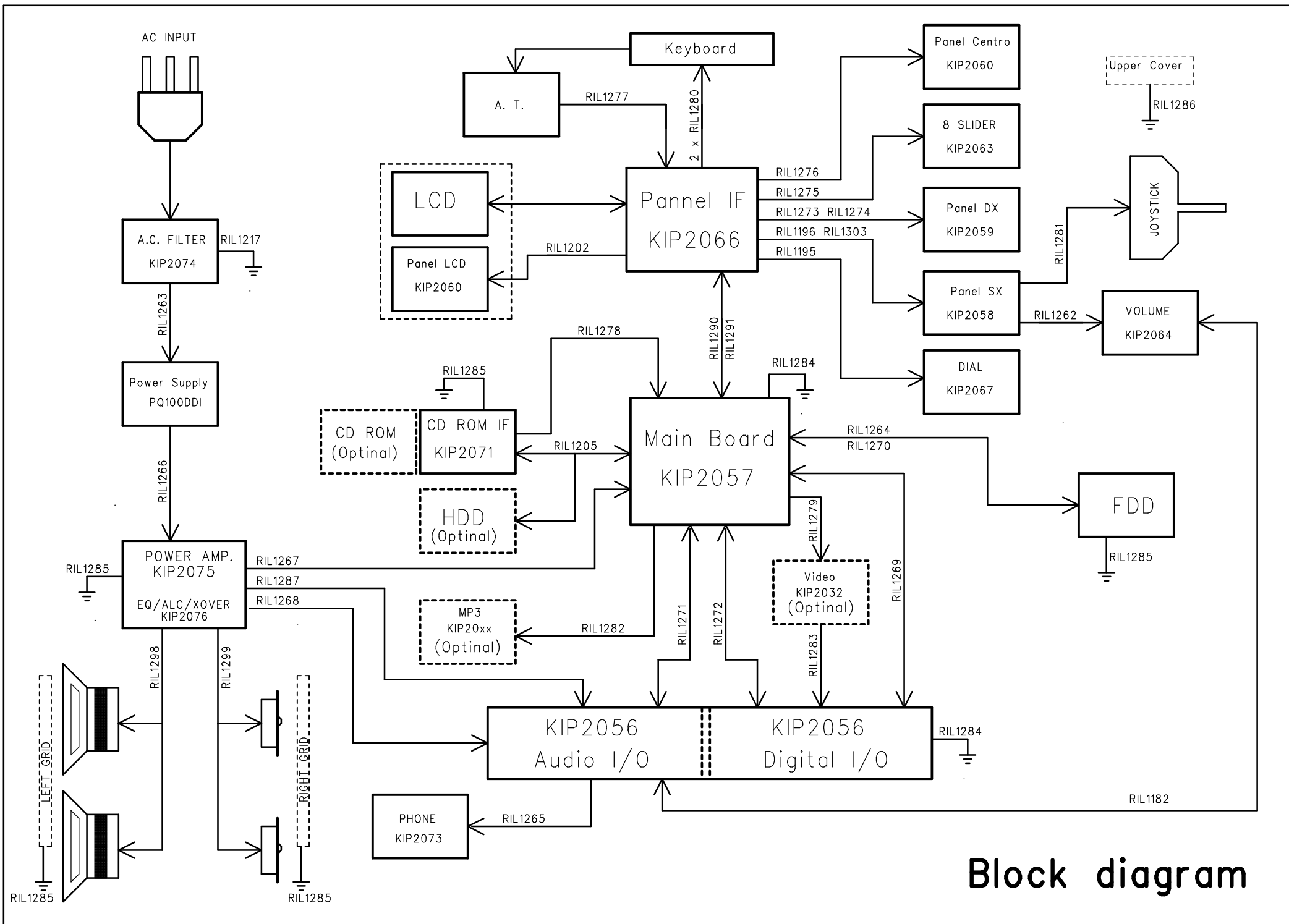


- VTA0001015
- PLA0001046
- FER0002058
- RIL0001287

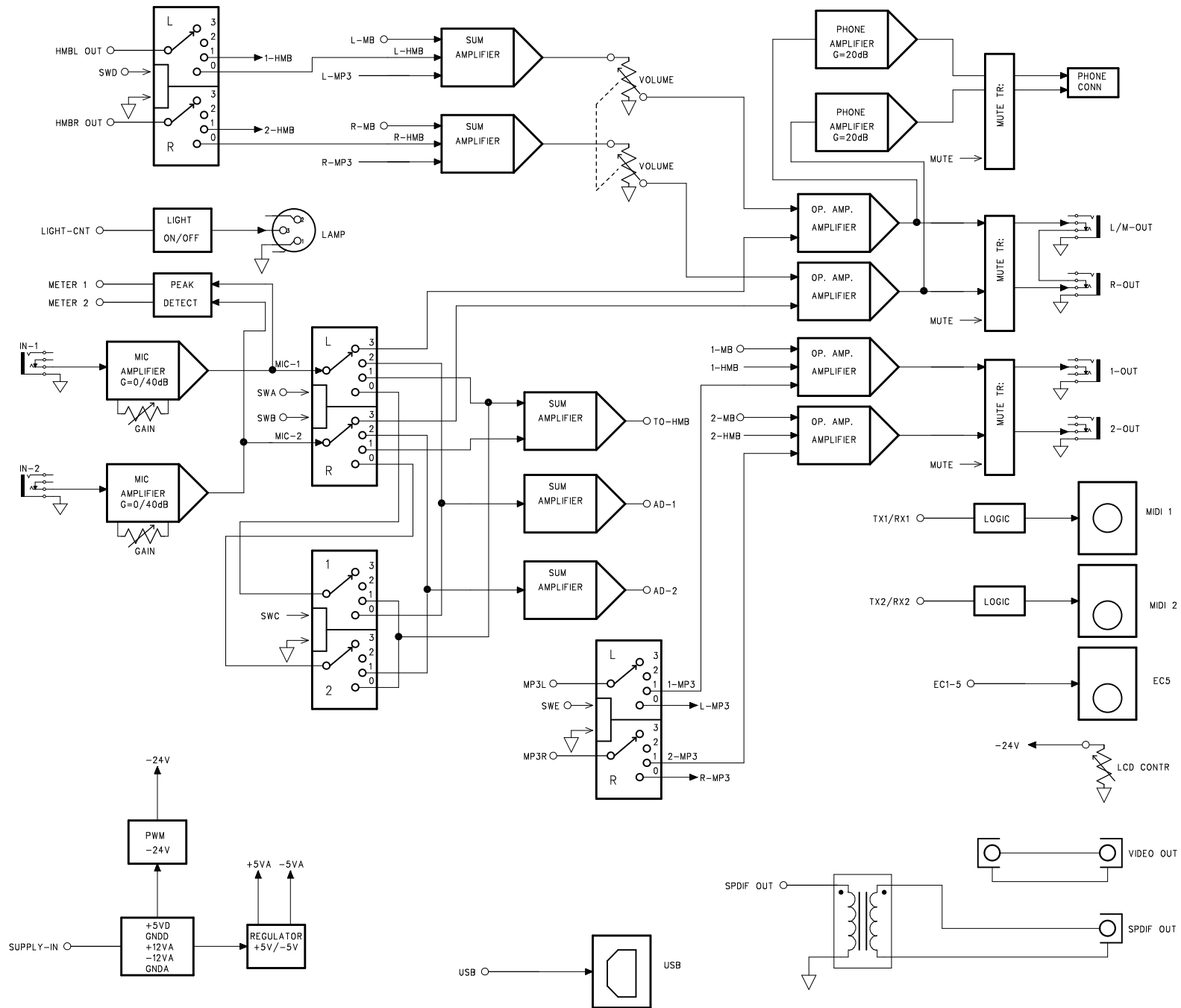


- RIL0001268
- GRA1002056
- VTA0001005
- RIL0001271
- RIL0001265
- RIL0001182

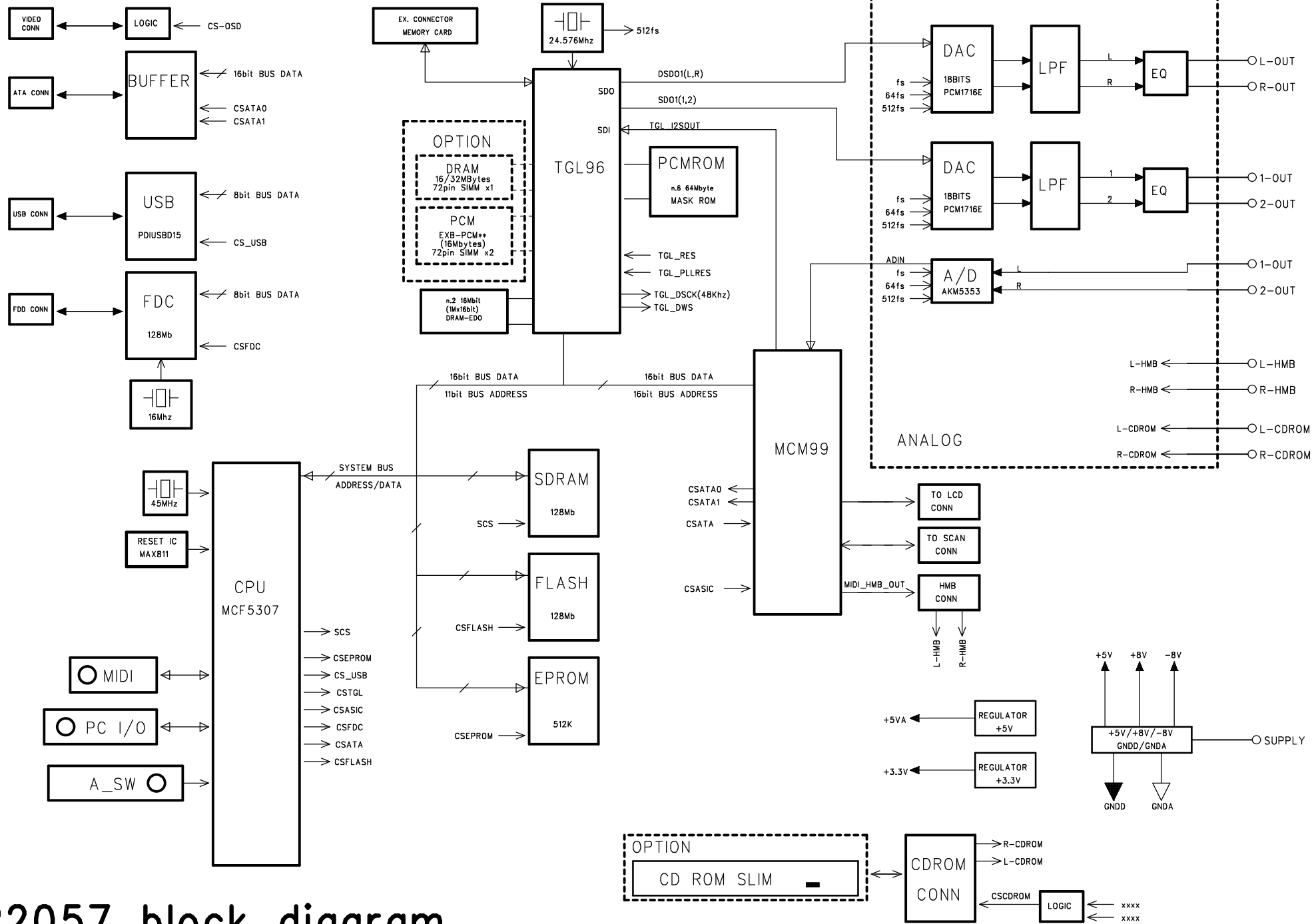
Output group



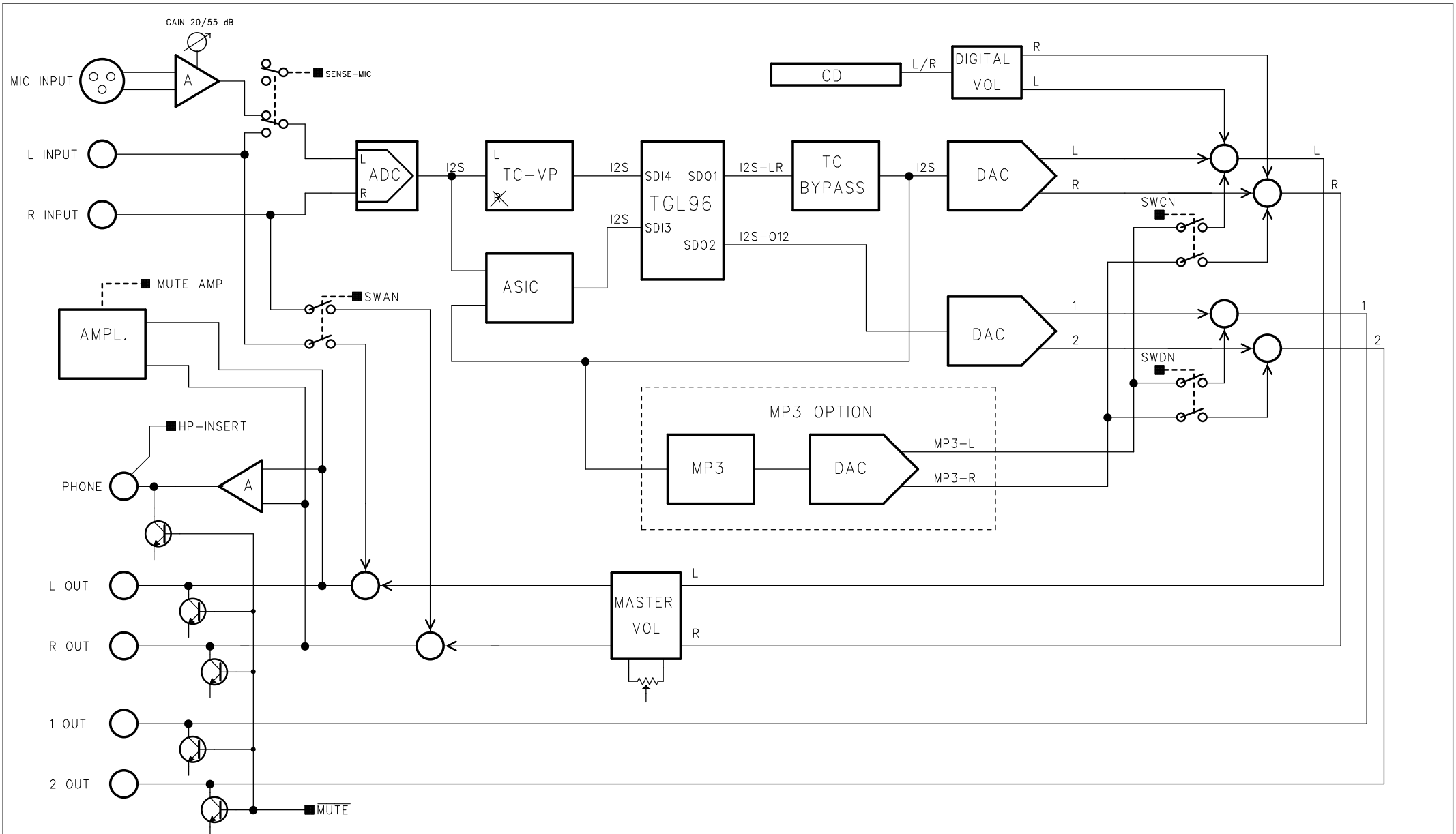
Block diagram



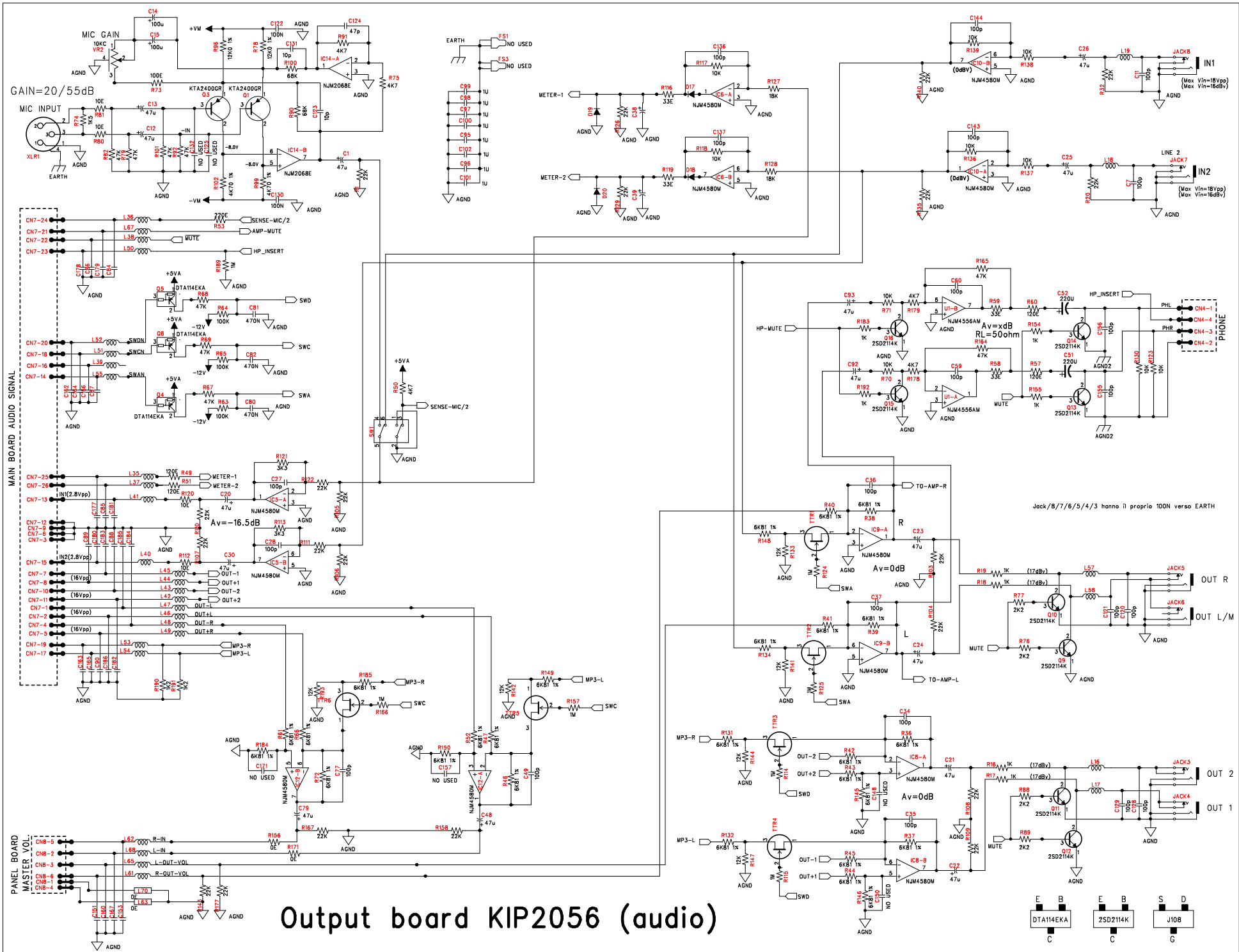
KIP2056 block diagram

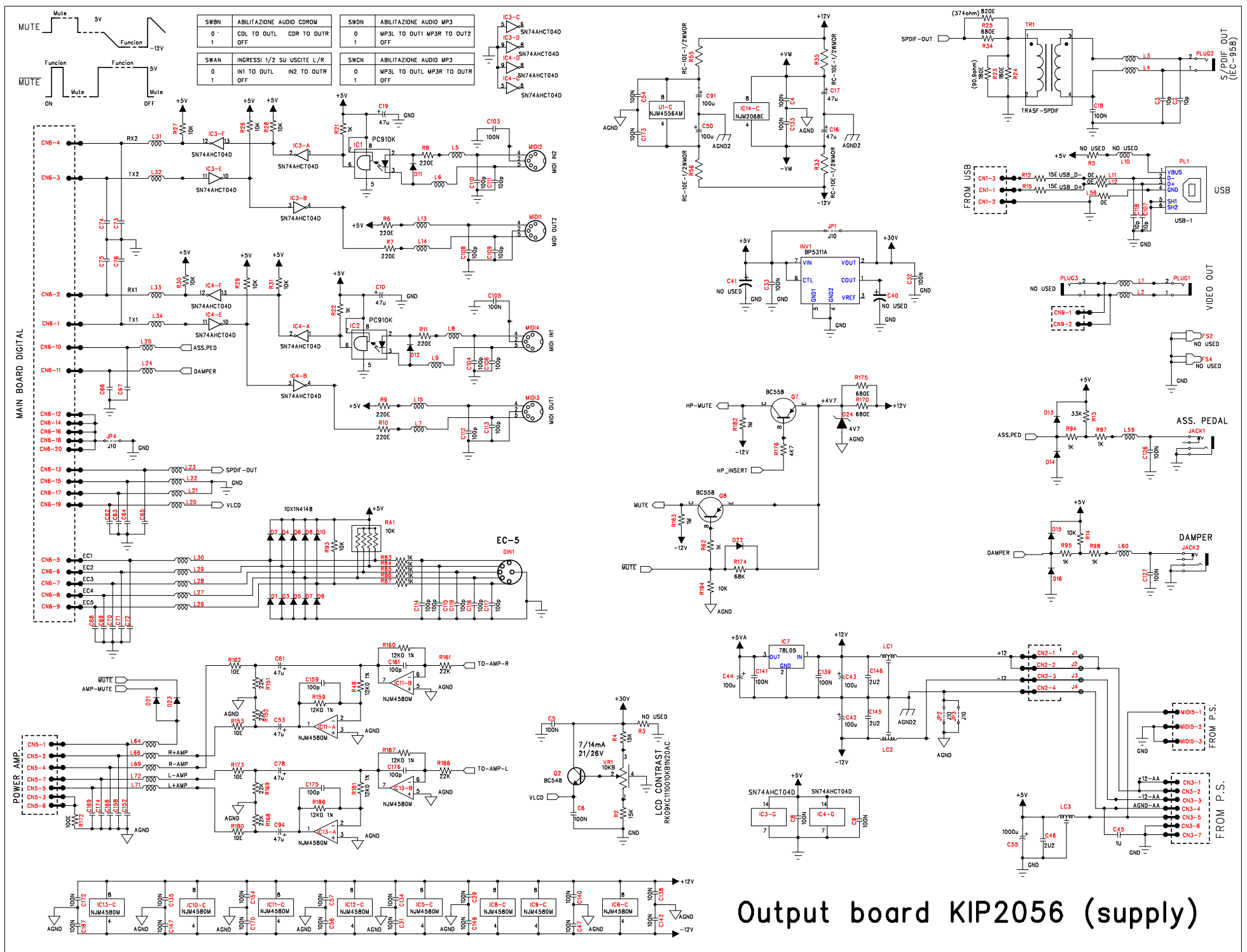


KIP2057 block diagram



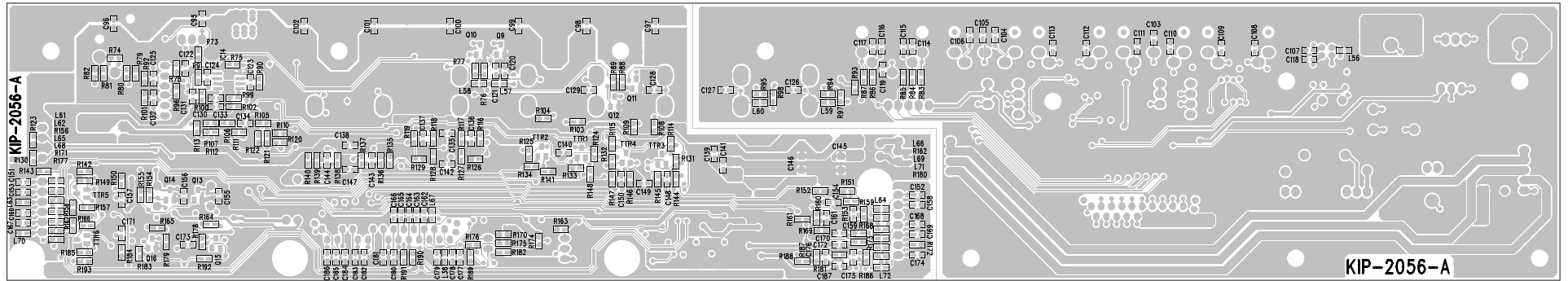
Audio block diagram



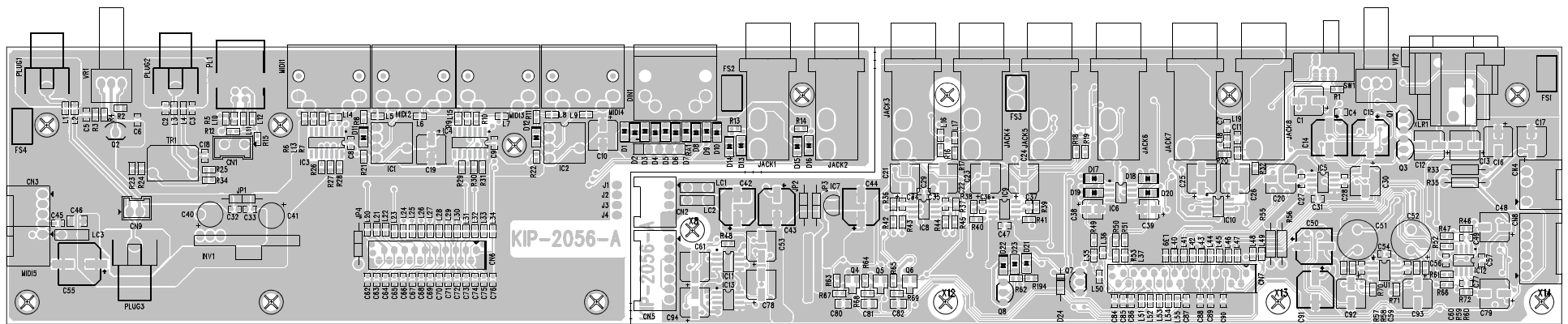


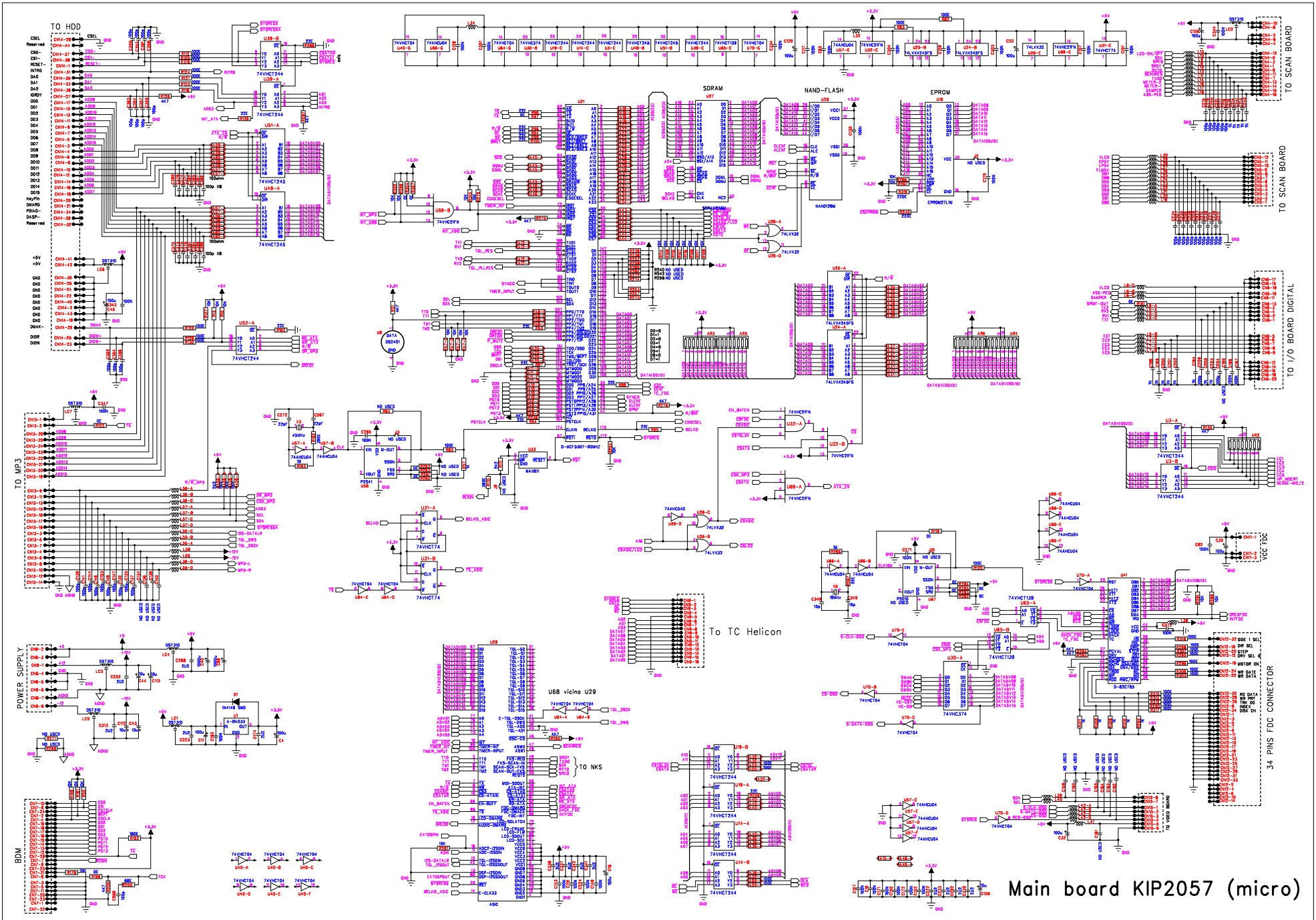
Output board KIP2056 (supply)

Output board KIP2056 bottom side



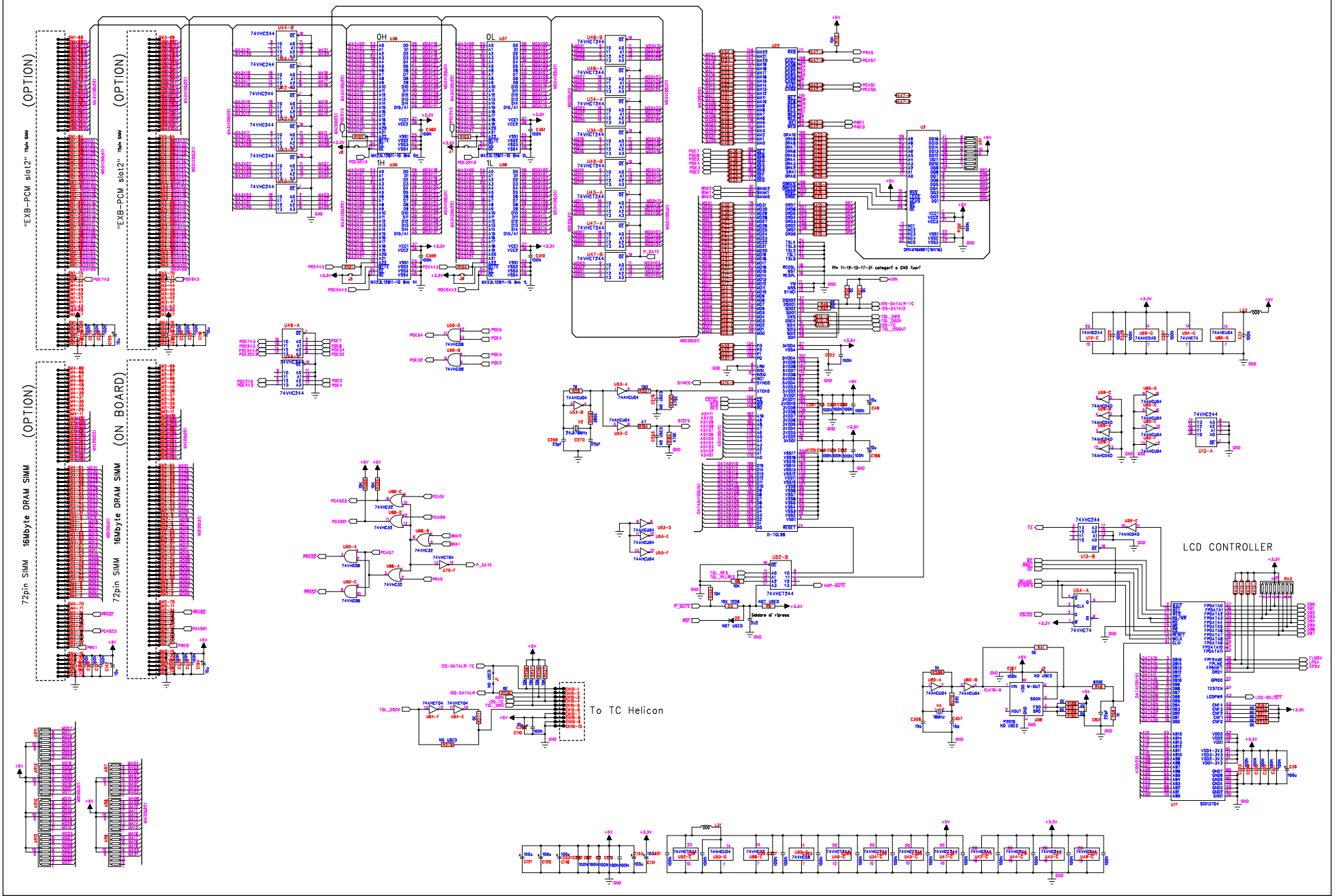
Output board KIP2056 top side



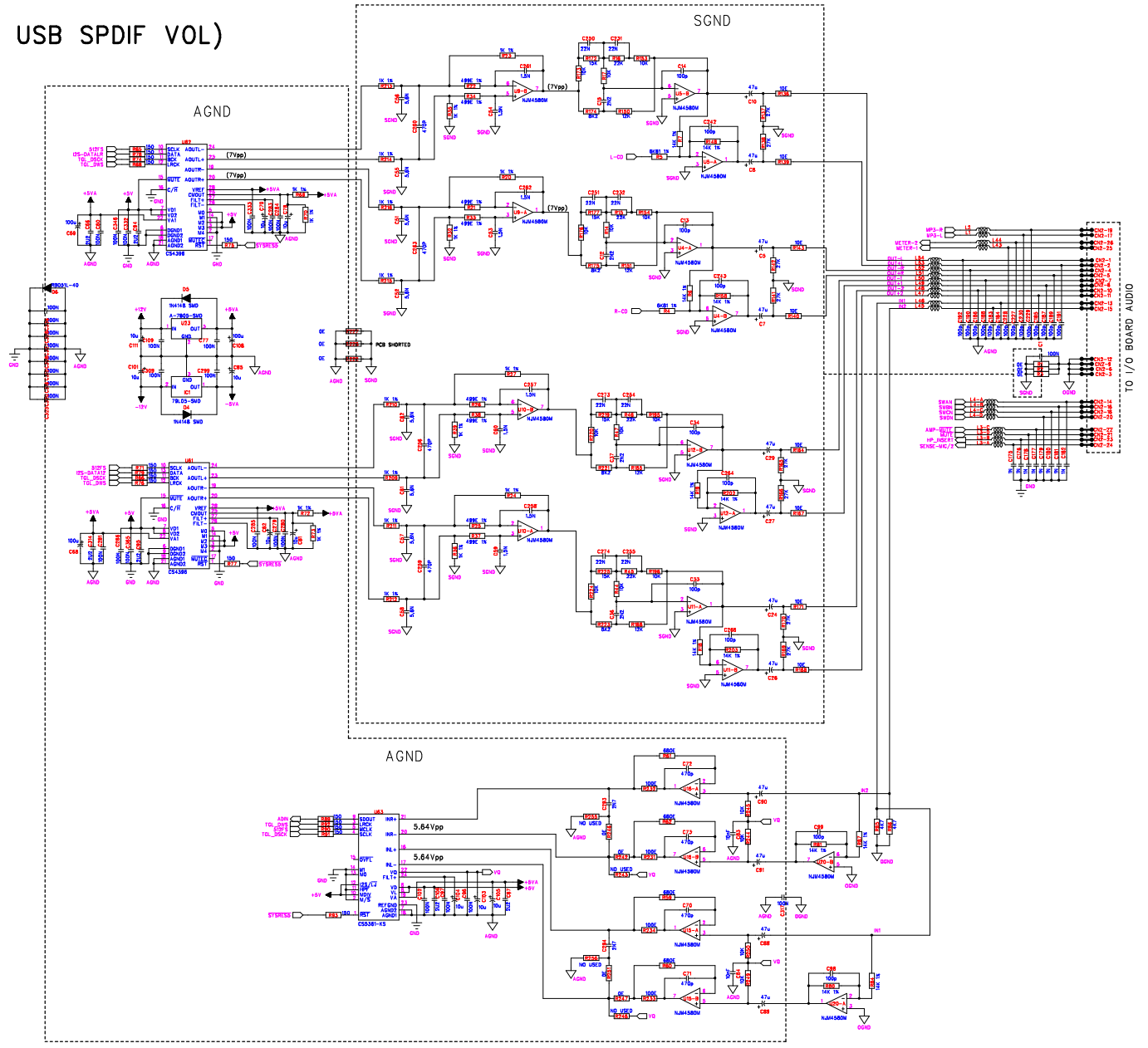
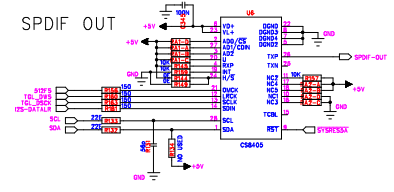
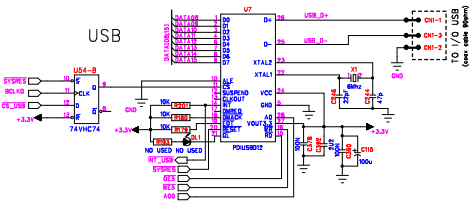
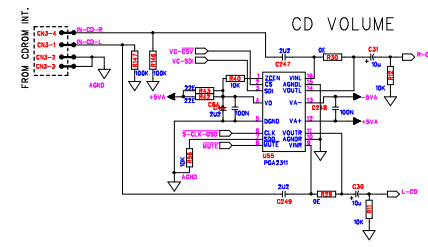
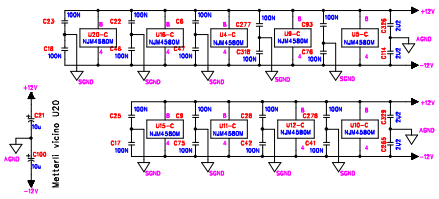


Main board KIP207 (micro)

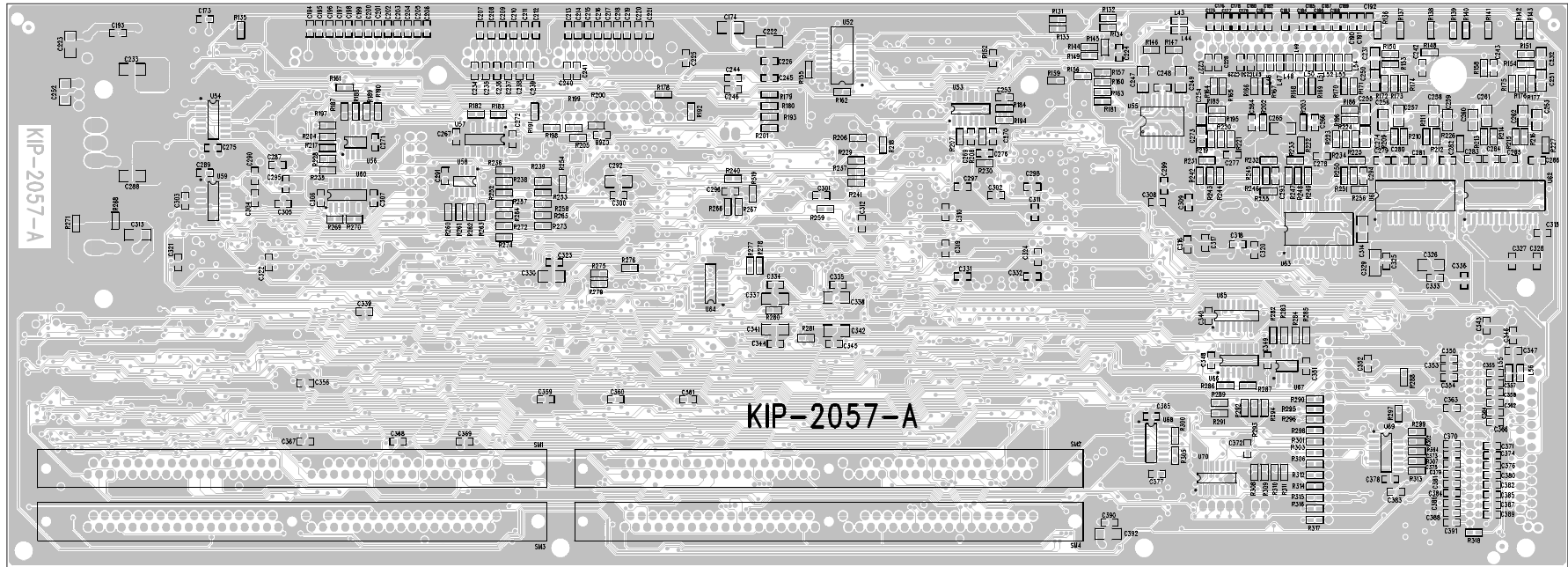
Main board KIP2057 (TGL)



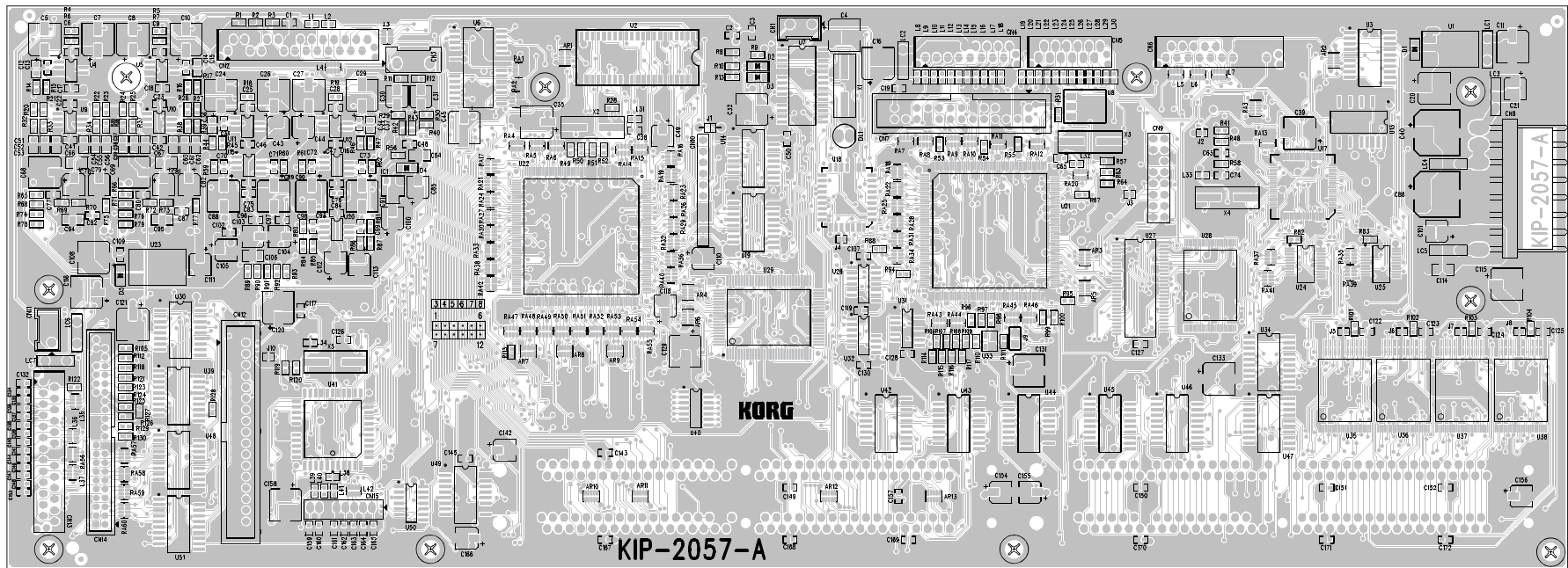
Main board KIP2057 (AD-DA USB SPDIF VOL)

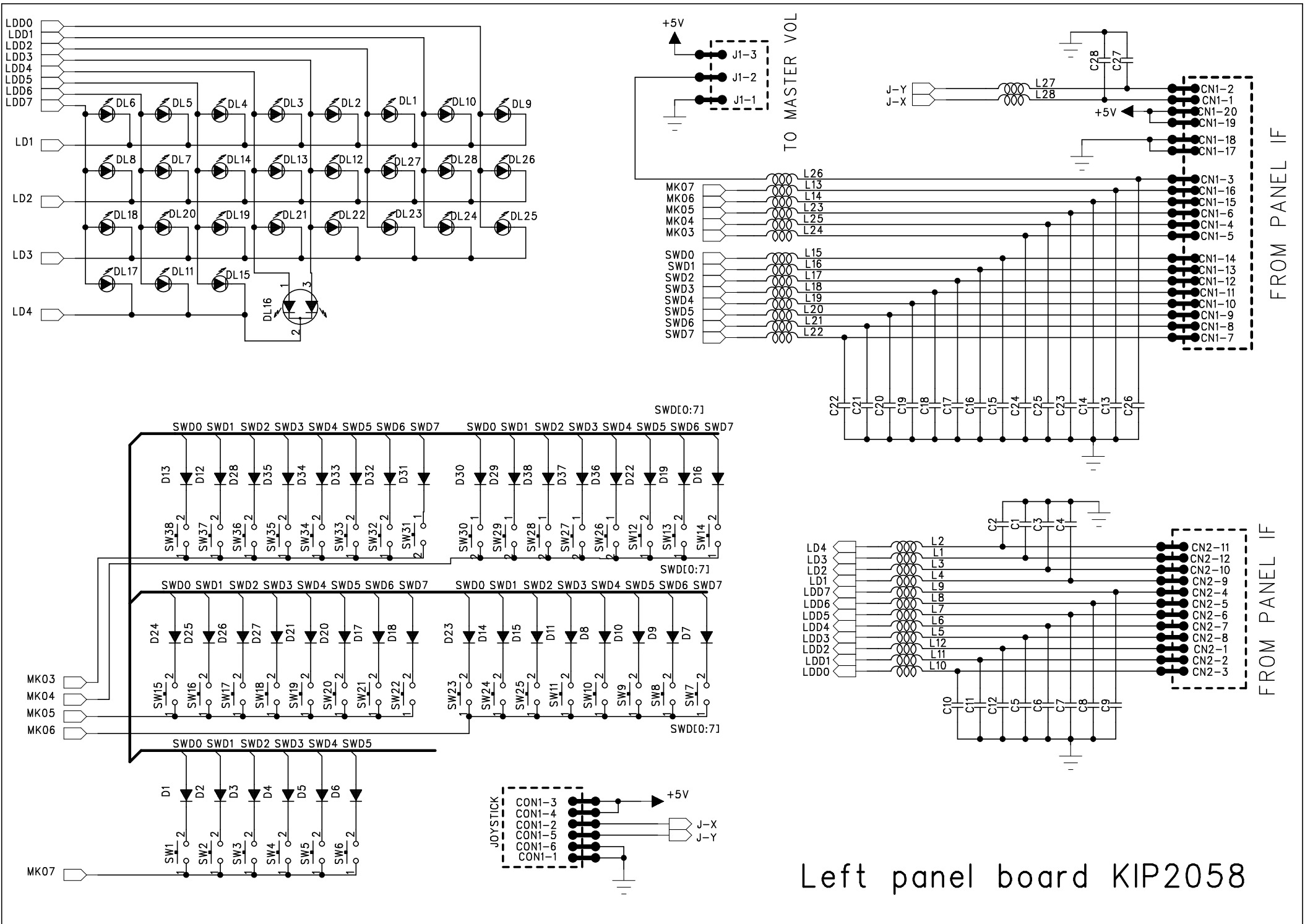


Main board KIP2057 bottom side



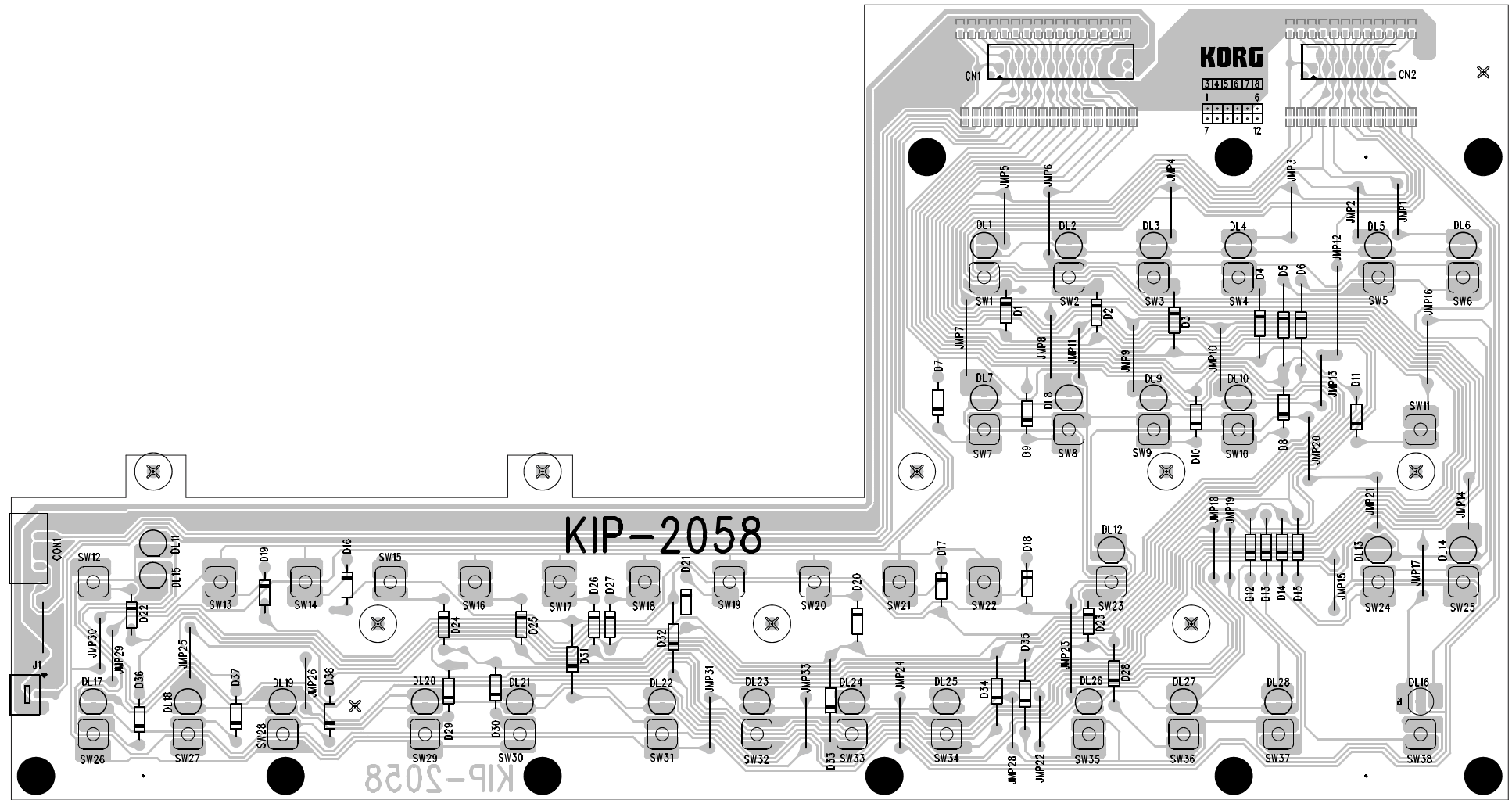
Main board KIP2057 top side

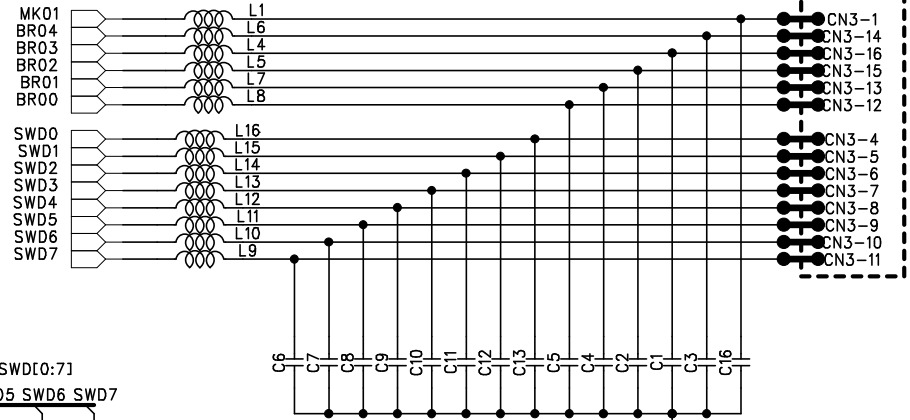
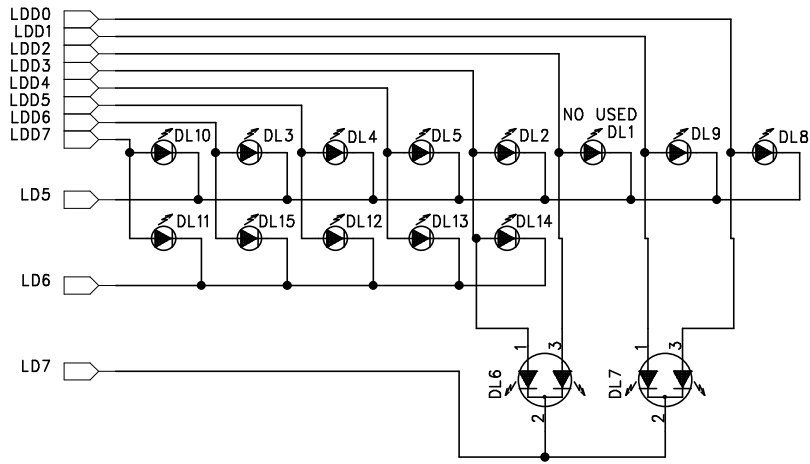




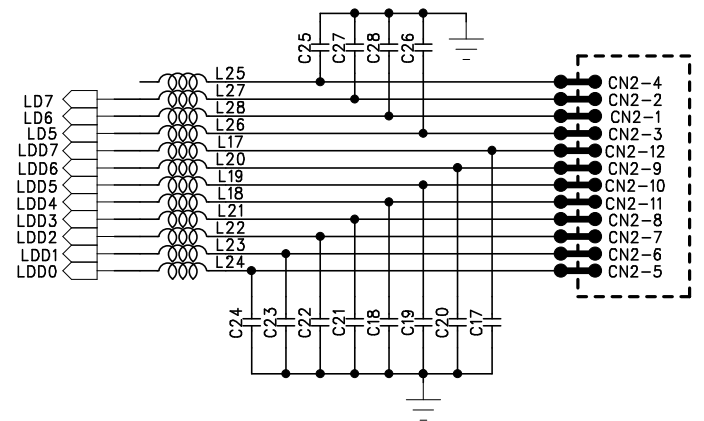
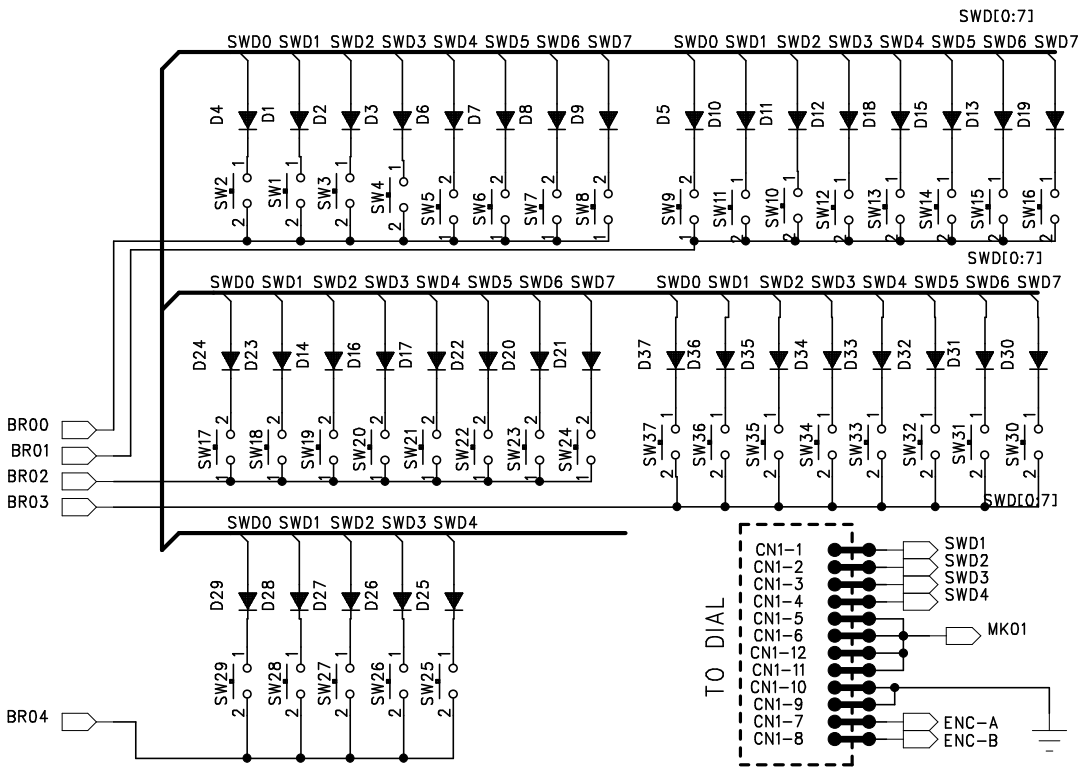
Left panel board KIP2058

Left panel board KIP2058 component side





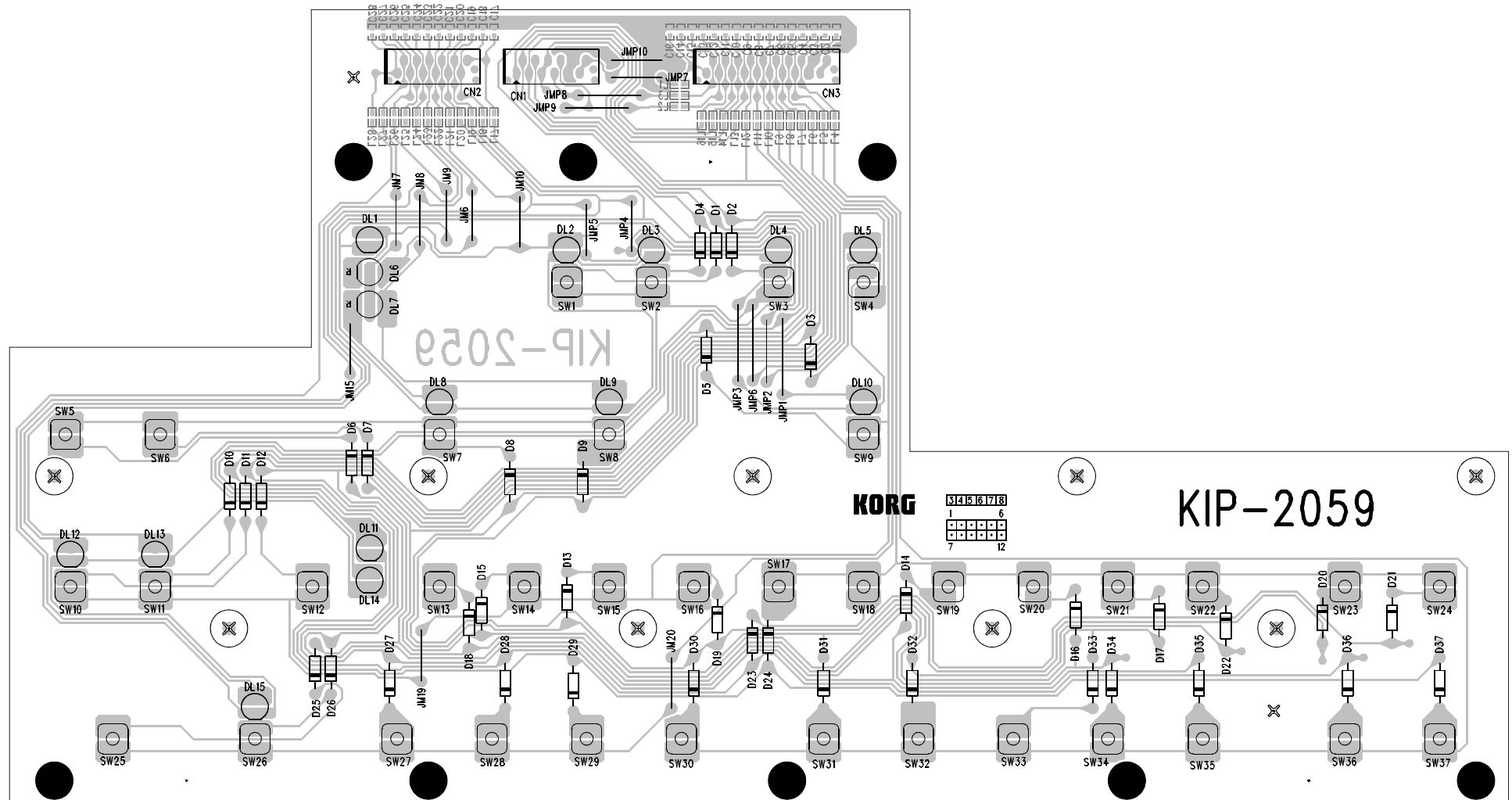
FROM PANEL IF

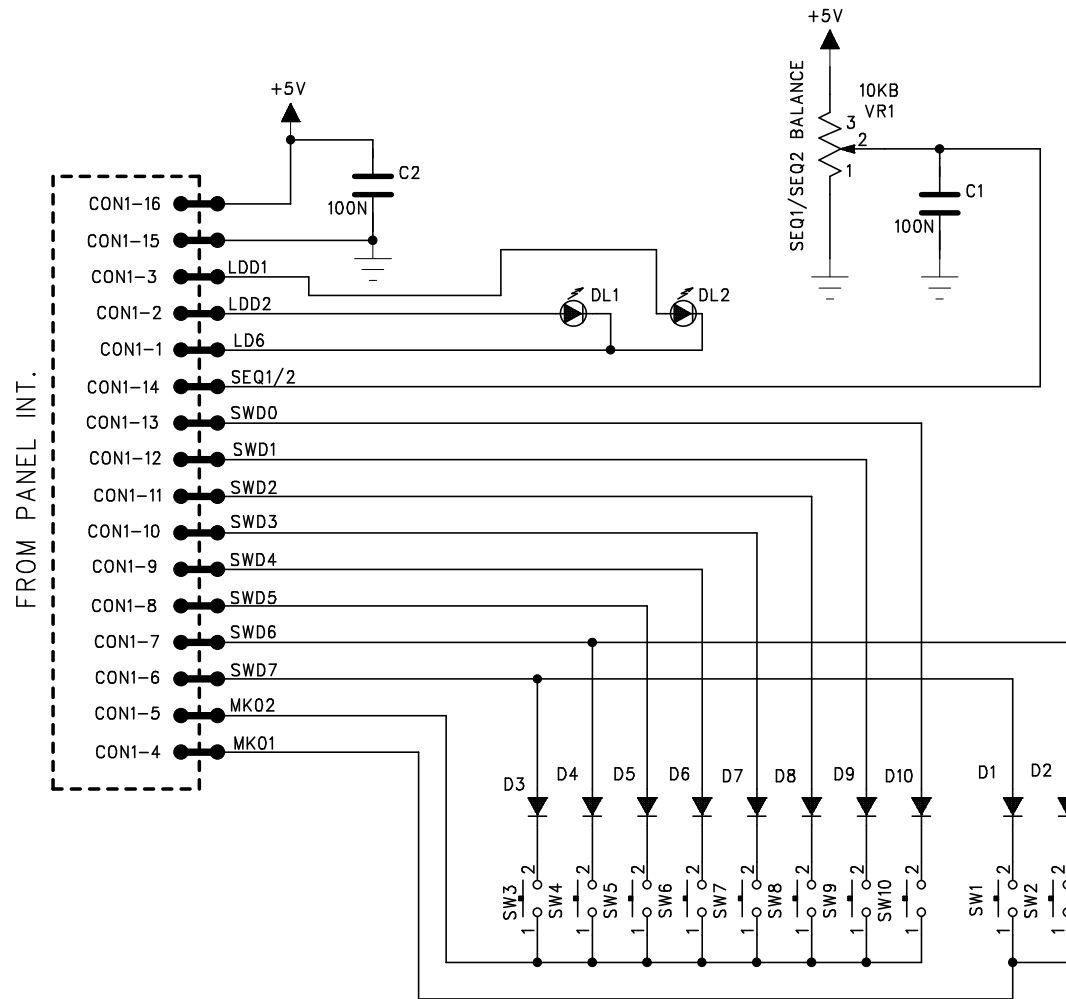


FROM PANEL IF

Right panel board KIP2059

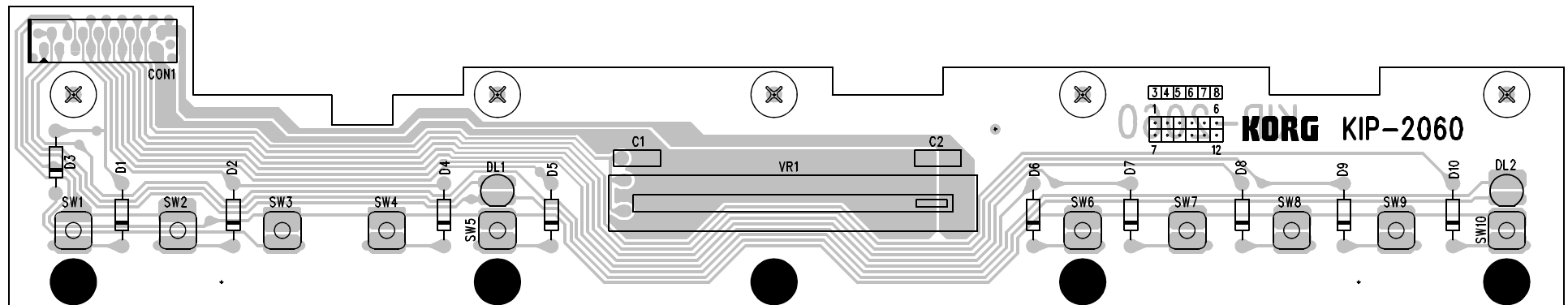
Right panel board KIP2059 component side

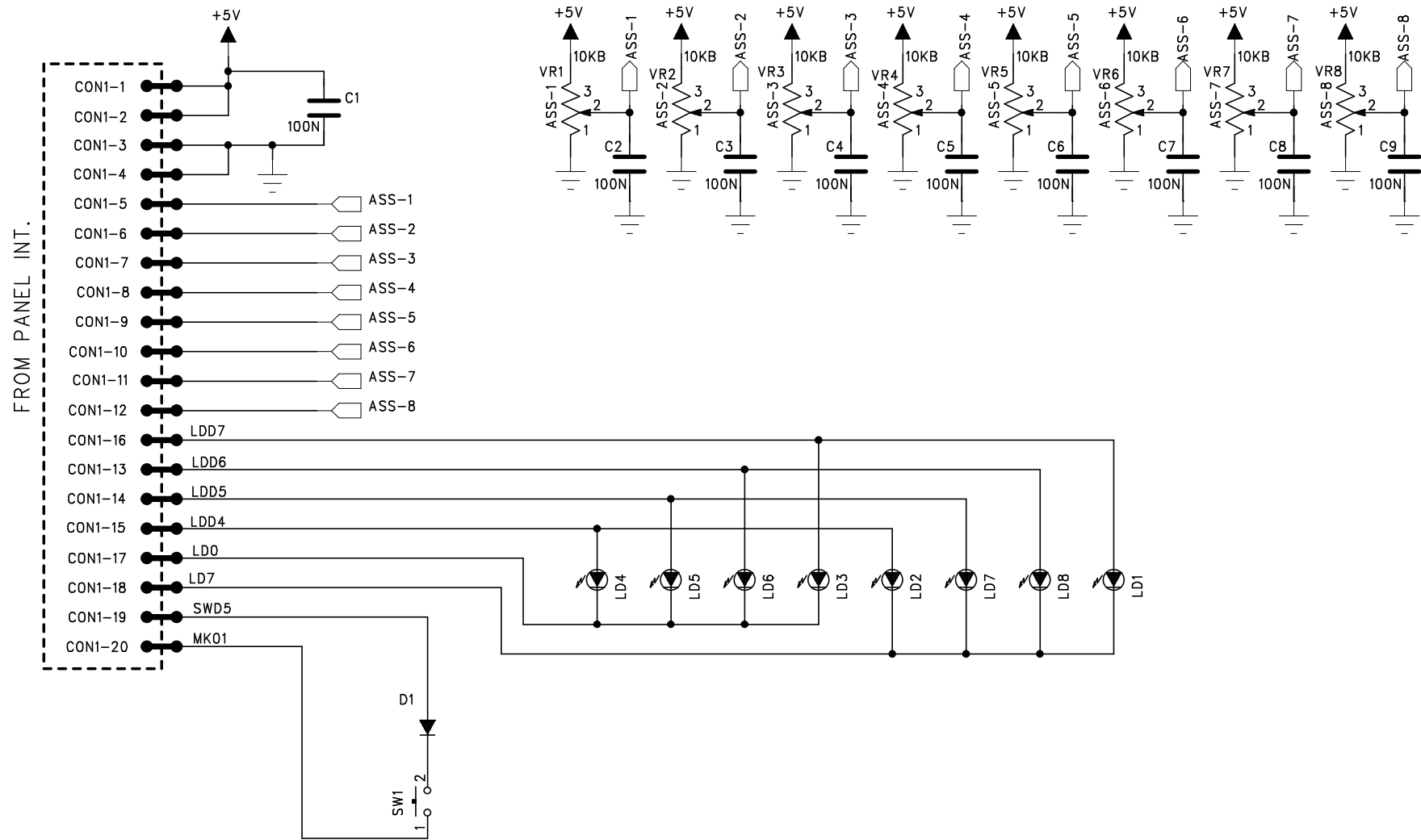




Central panel board KIP2060

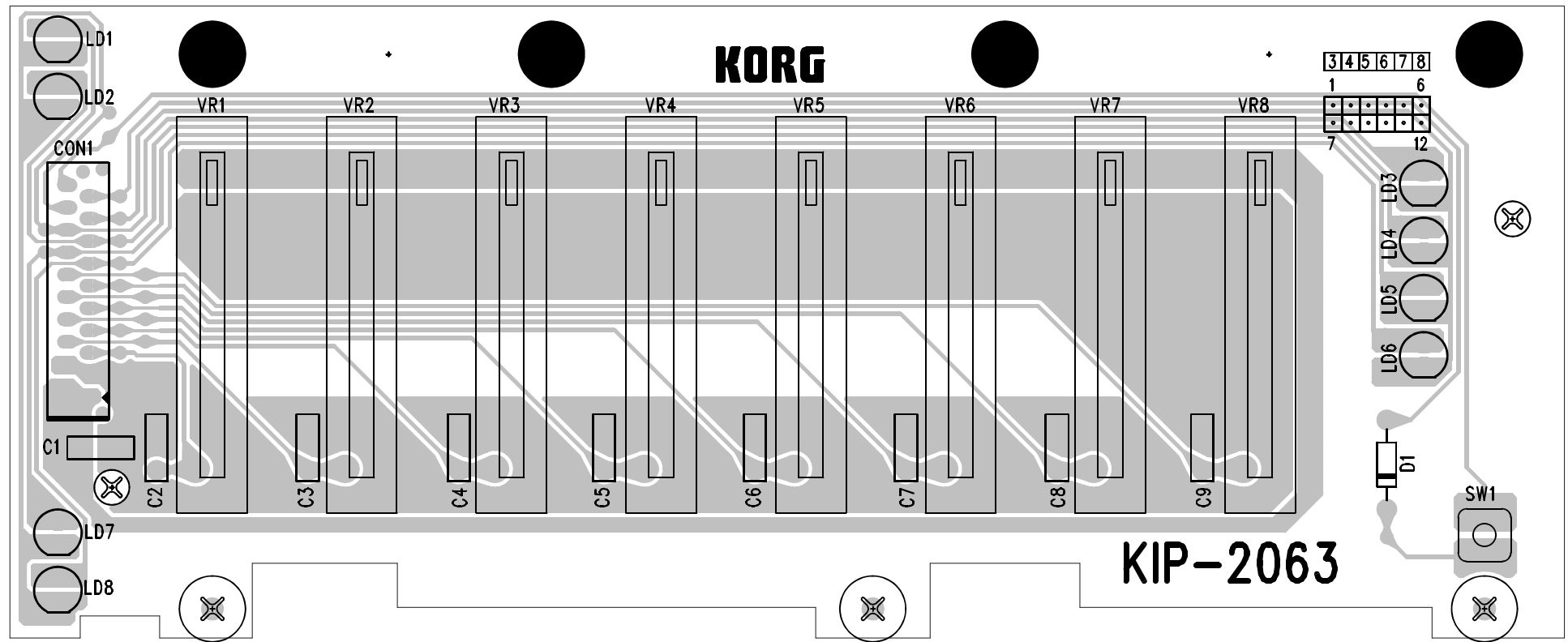
Central panel board KIP2060 component side

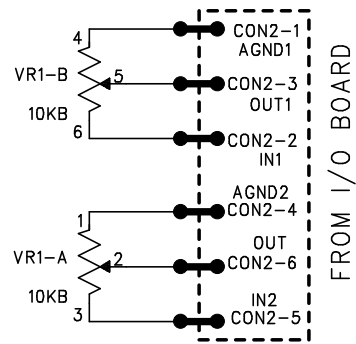
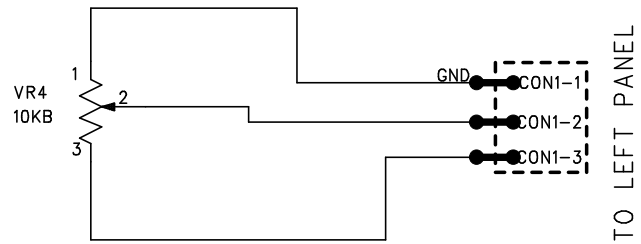




8 slider panel board KIP2063

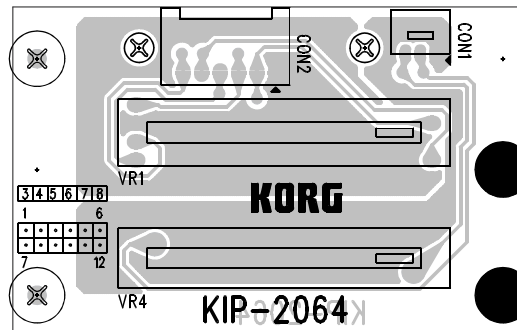
8 slider panel board KIP2063 component side

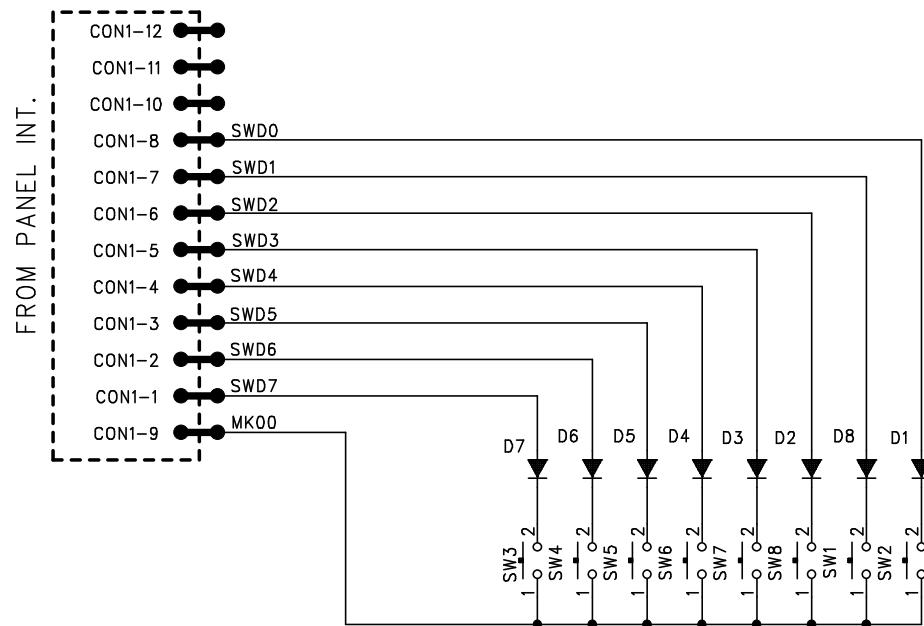




Master volume KIP2064

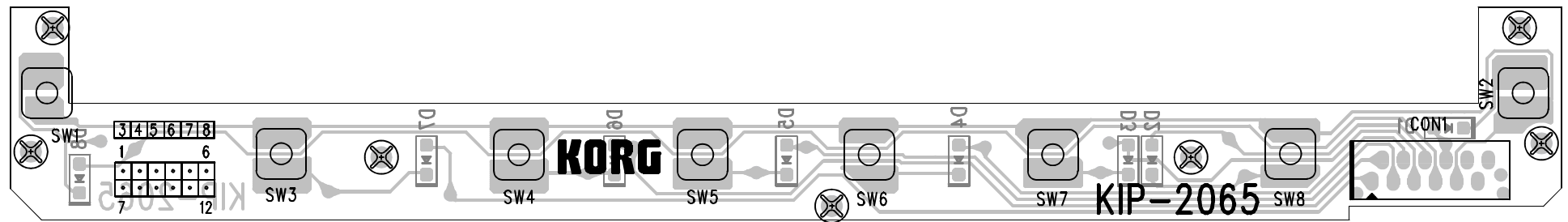
Master volume board KIP2064 component side

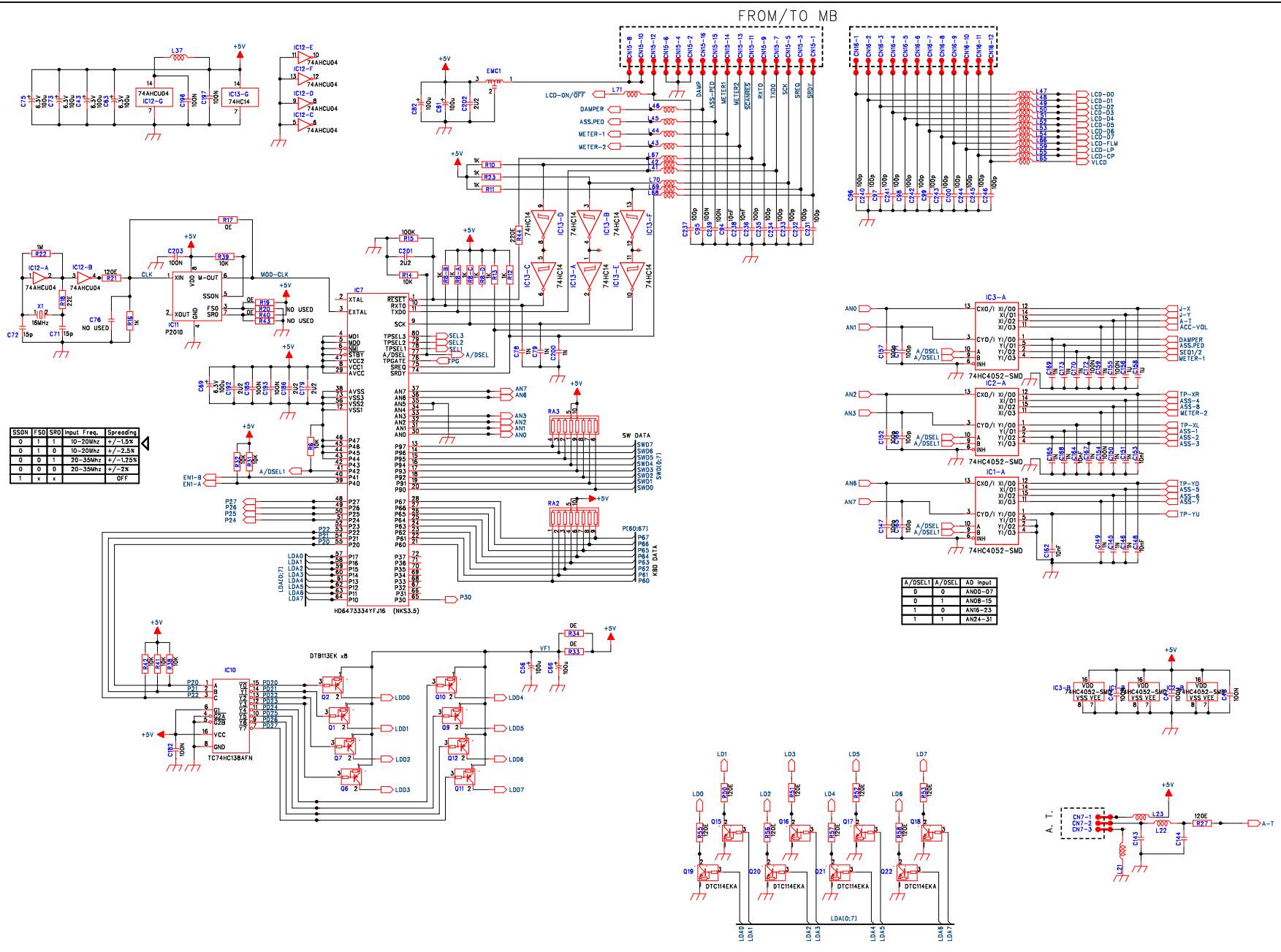




LCD board KIP2065

LCD board KIP2065 component side



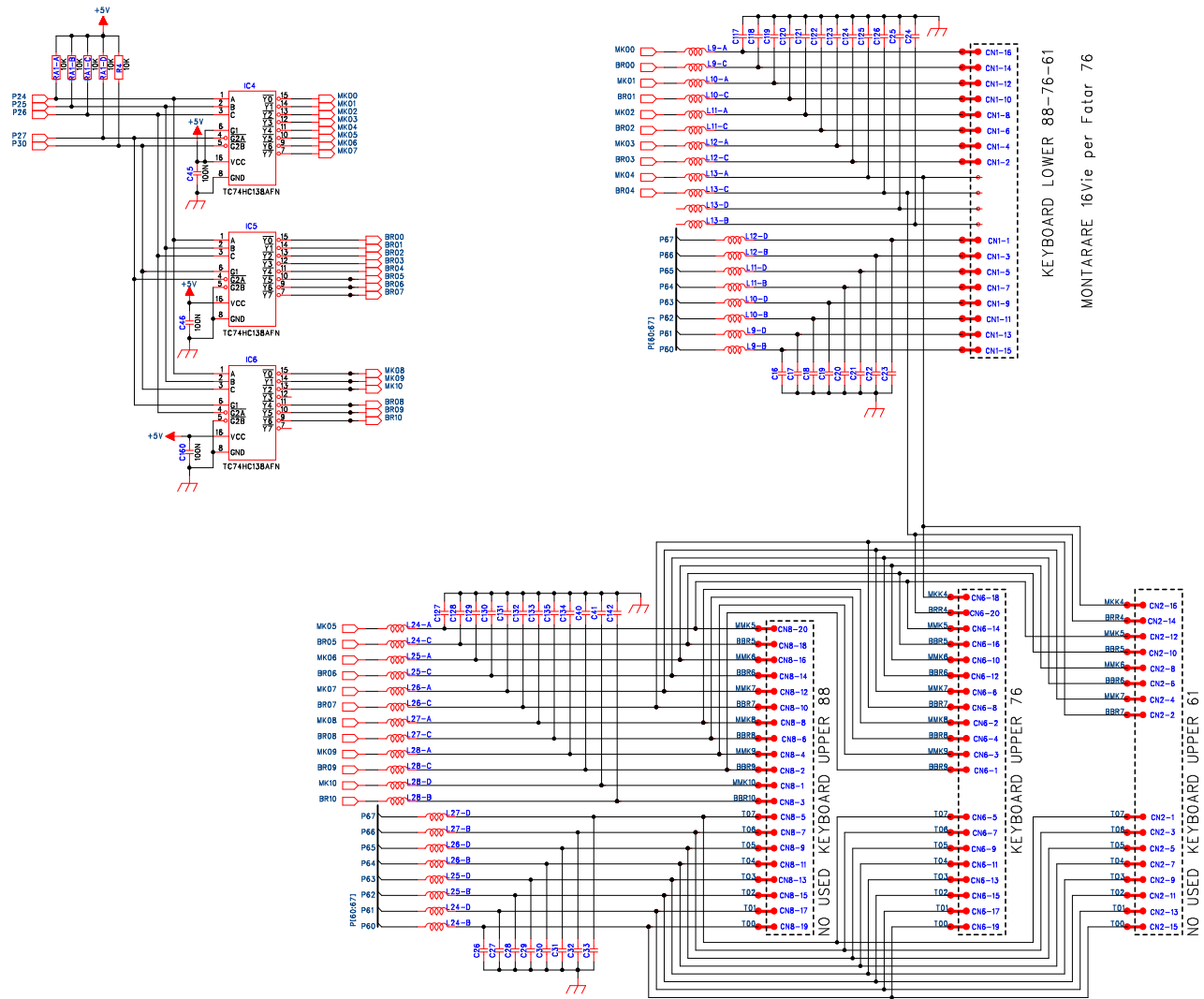


SSON	FSD	SRO	Input Freq.	Spreading
0	1	1	10-20MHz	+/-1.5%
0	1	0	10-20MHz	+/-2.5%
0	0	1	20-35MHz	+/-1.5%
0	0	0	20-35MHz	+/-2%
1	x	x		OFF

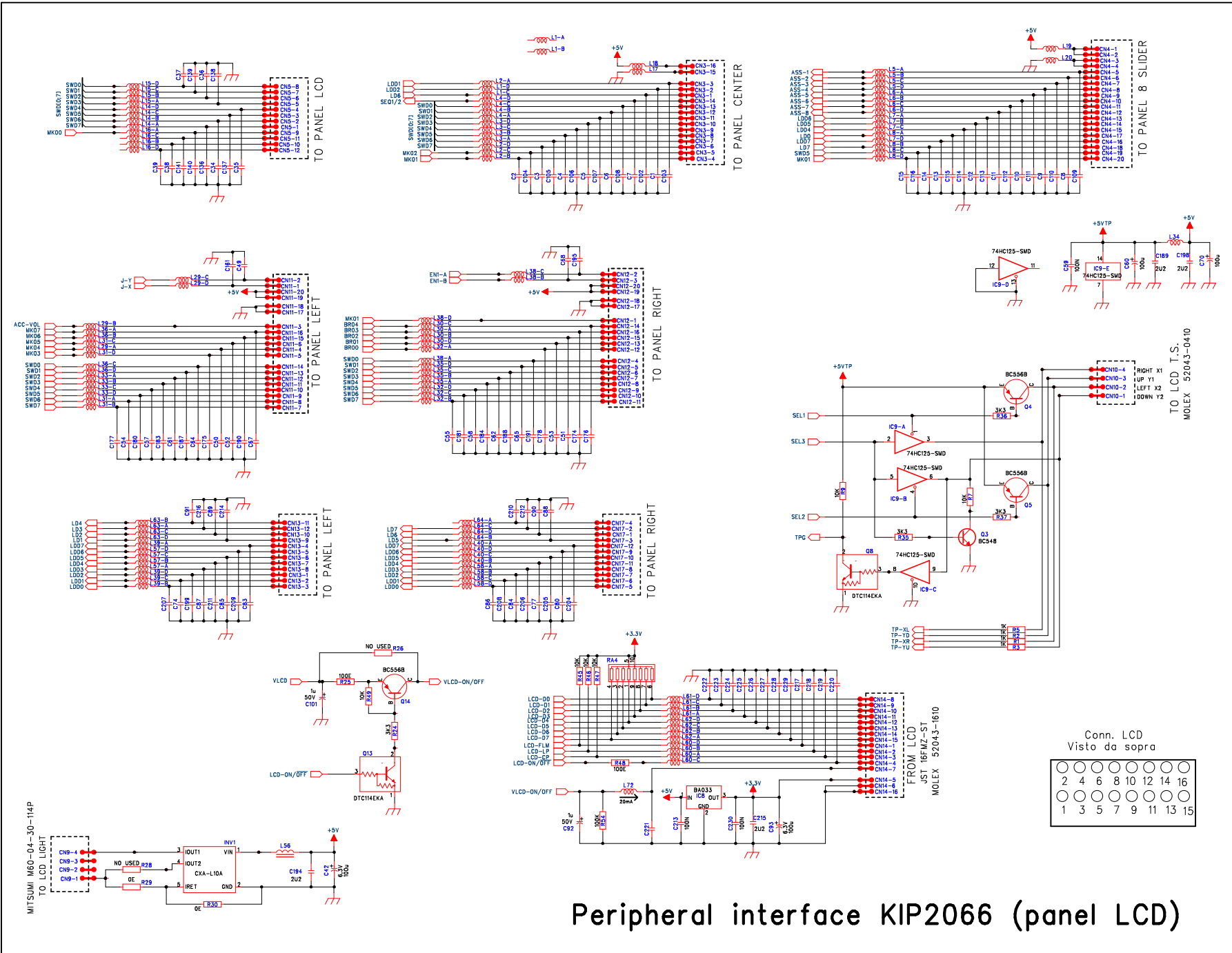
A/DSELE1	A/DSELE2	AD Input
0	0	AND0-07
0	1	AND8-15
1	0	AND16-23
1	1	AND24-31

Peripheral interface KIP2066 (scan)

SYNCHRONOUS MODE

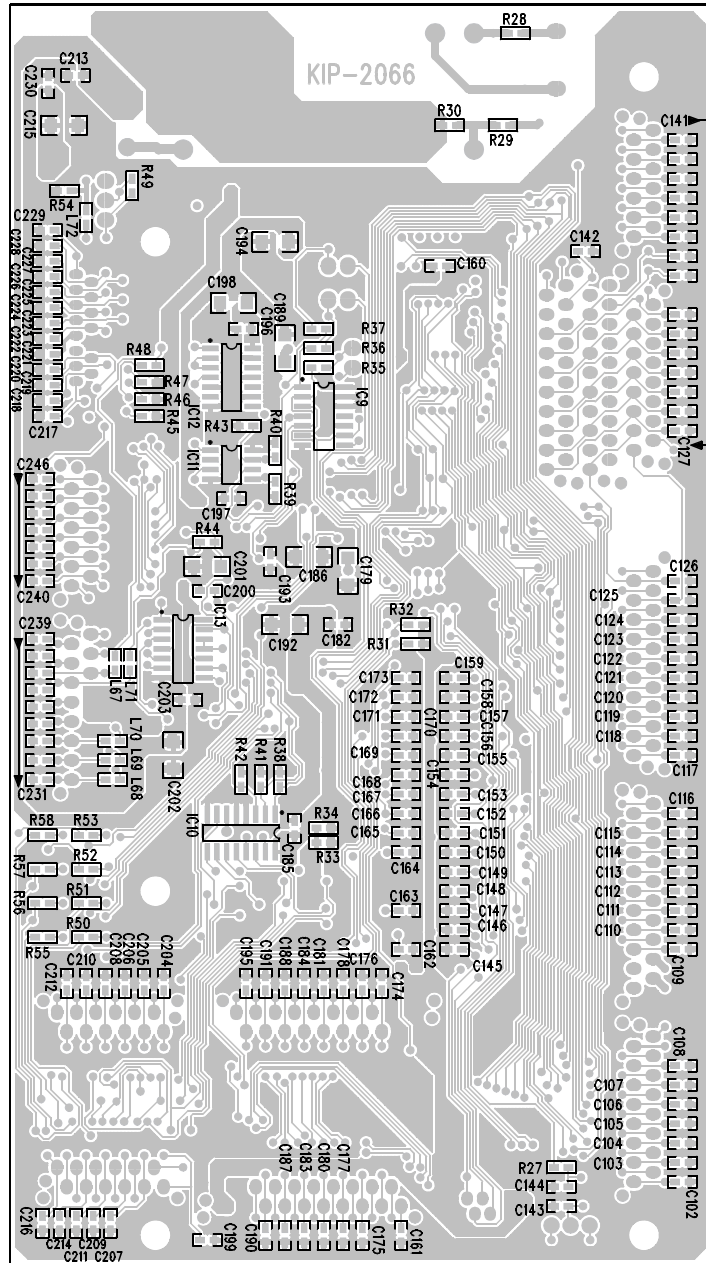


Peripheral interface KIP2066 (keyboard)

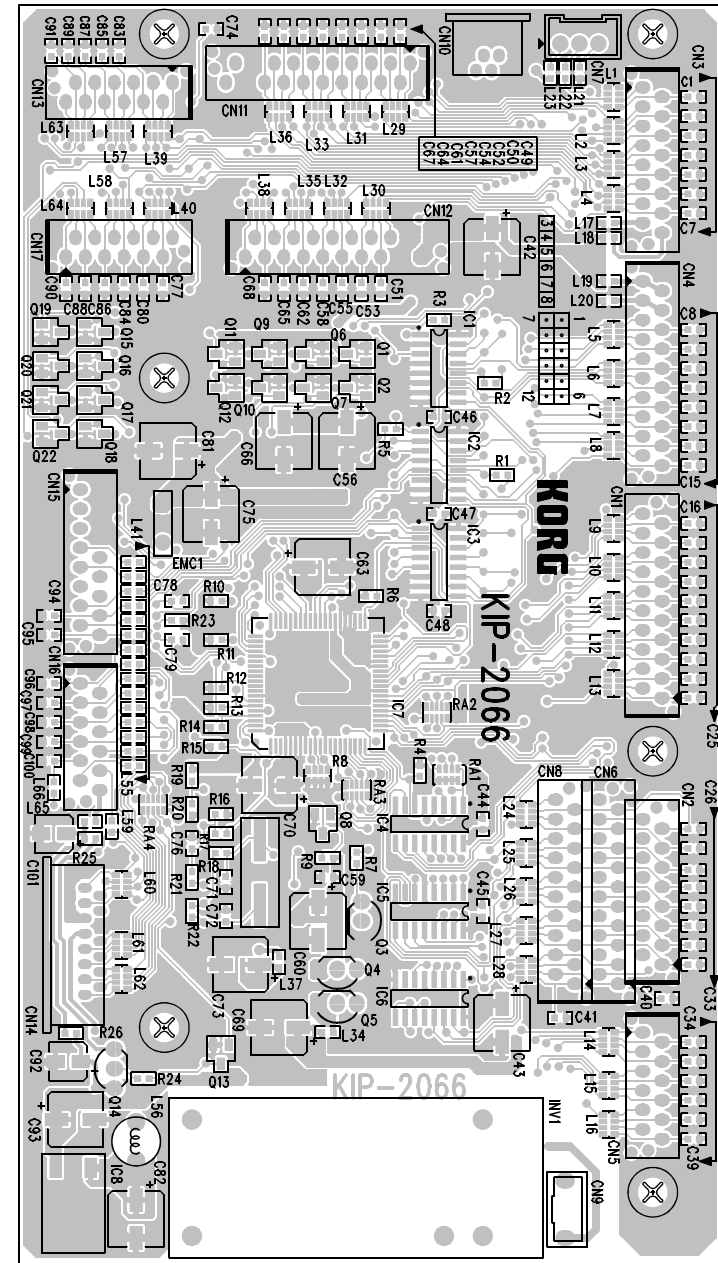


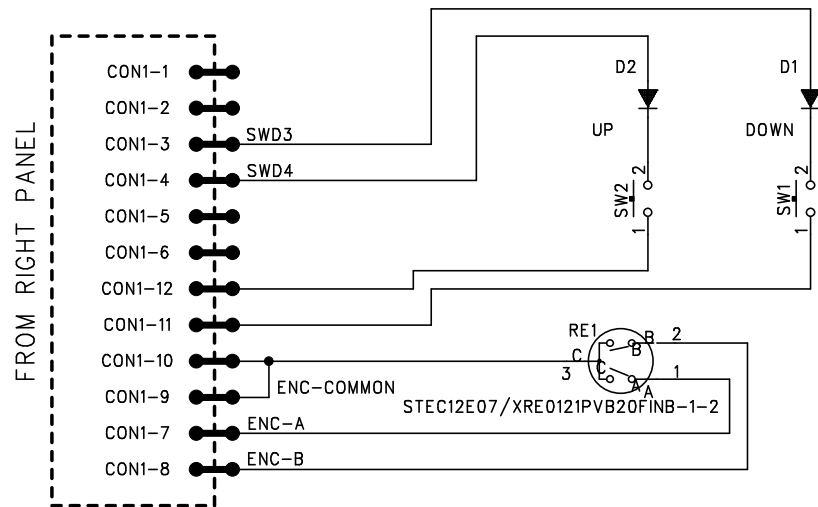
Peripheral interface KIP2066 (panel LCD)

Peripheral interface KIP2066 bottom side



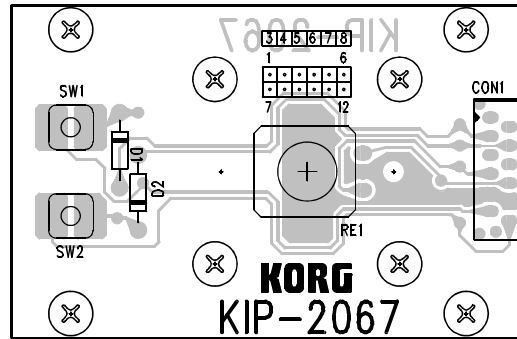
Peripheral interface KIP2066 top side

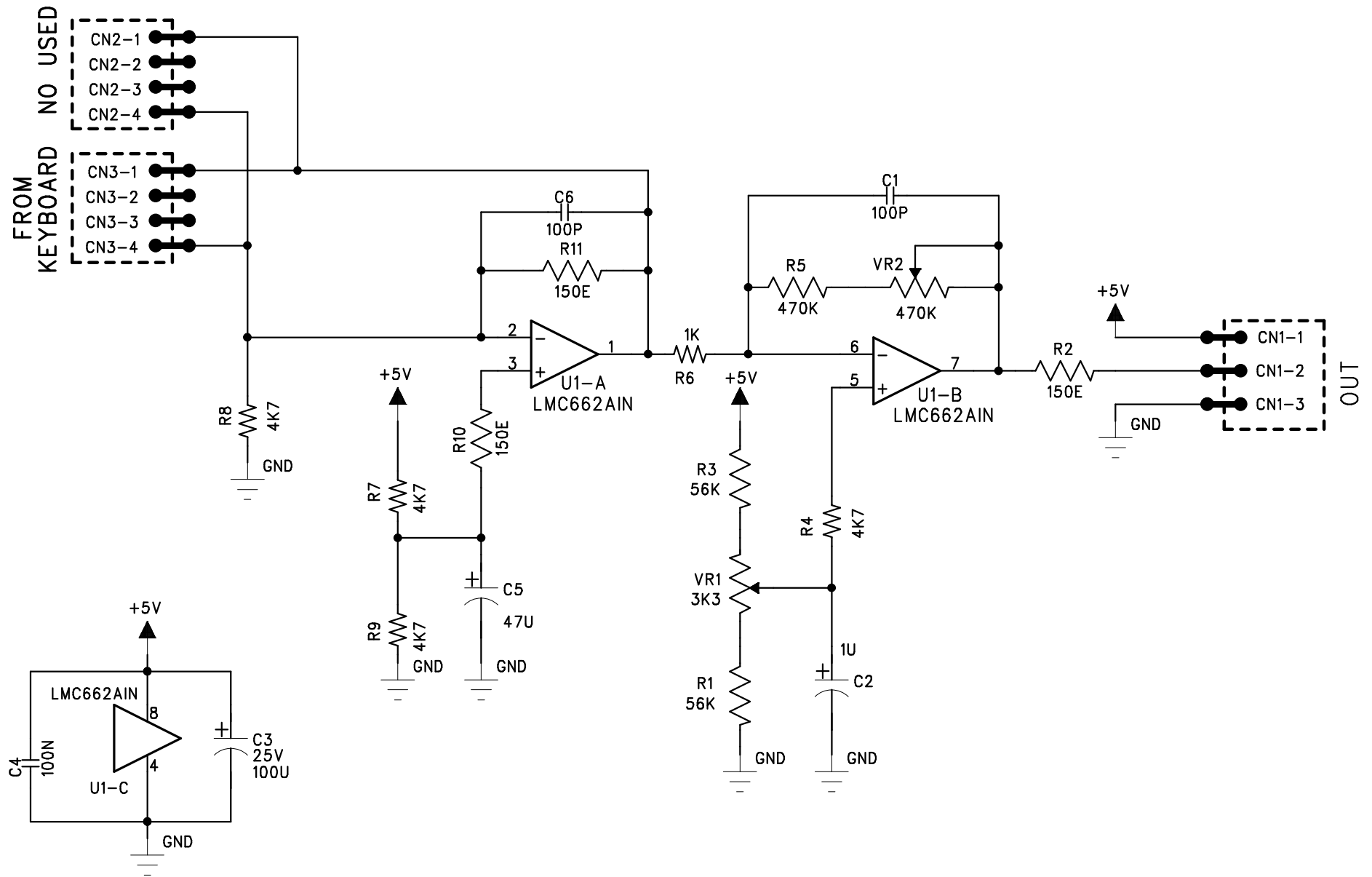




Dial controller KIP2067

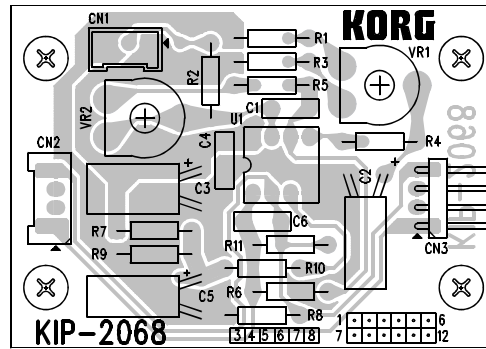
Dial controller KIP2067 component side



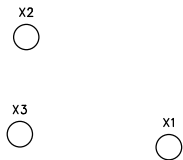


Aftertouch board KIP2068

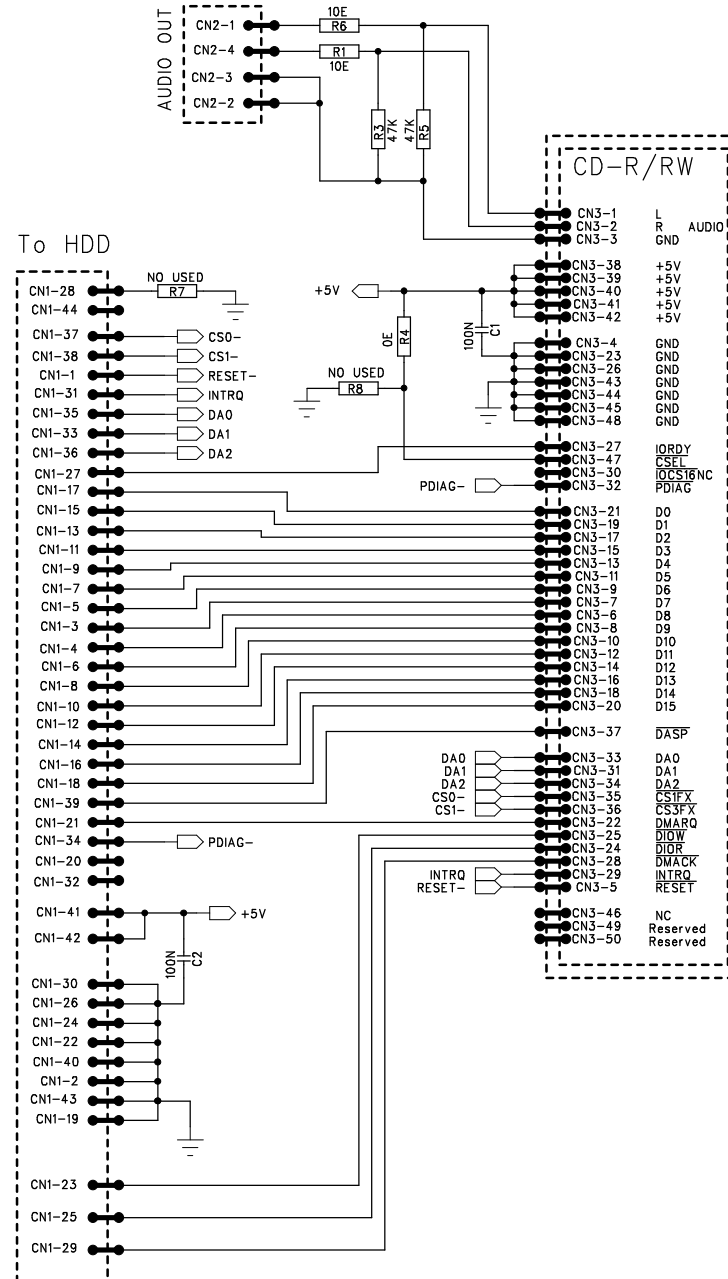
Aftertouch board KIP2068 component side



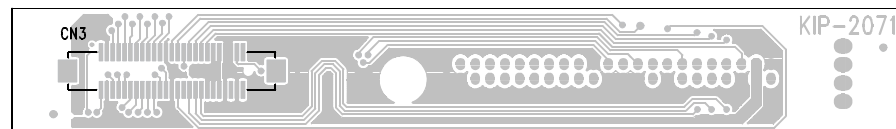
CDRom interface KIP2071



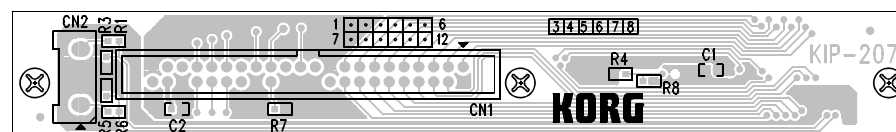
CD Used	Used	NO Used	CSEL=1	CSEL=0
TEAC CD-224E	R8	R4	Master	Slave
Panasonic UJDA360	R4	R8	Master	Slave

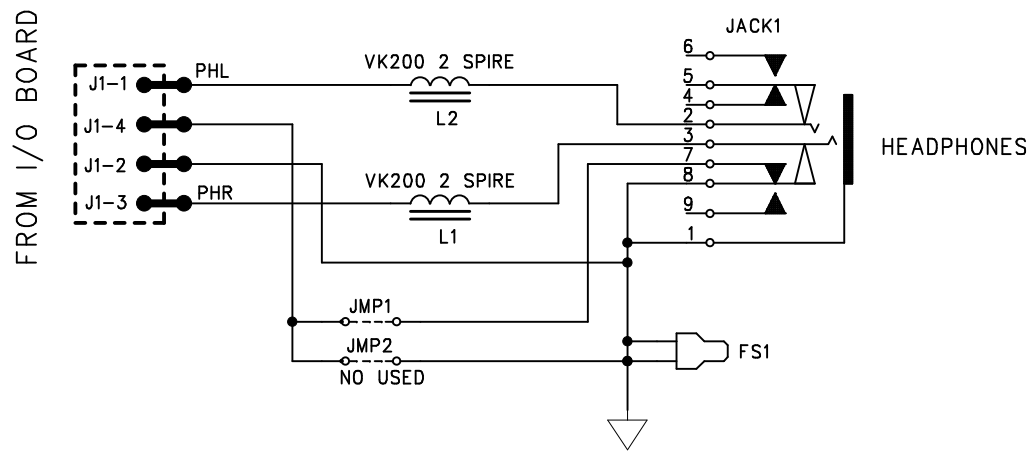


CDRom interface KIP2071 bottom side



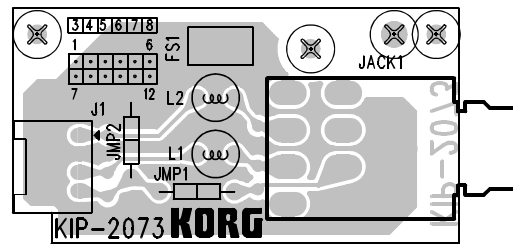
CDRom interface KIP2071 top side

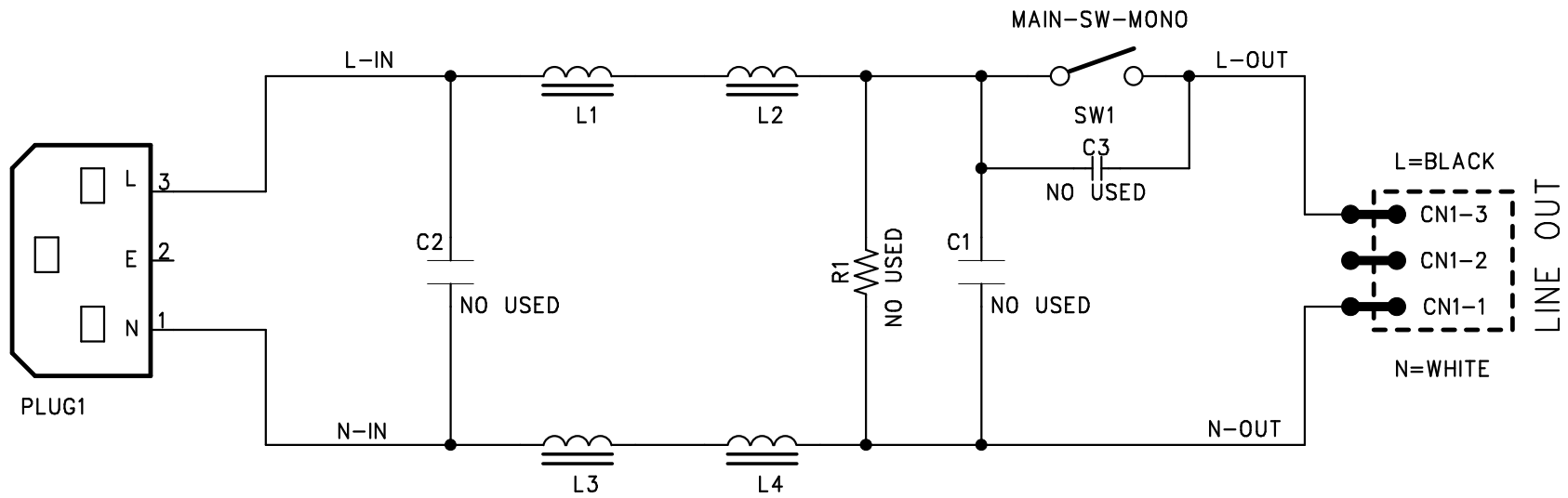




Headphone board KIP2073

Headphone board KIP2073 component side

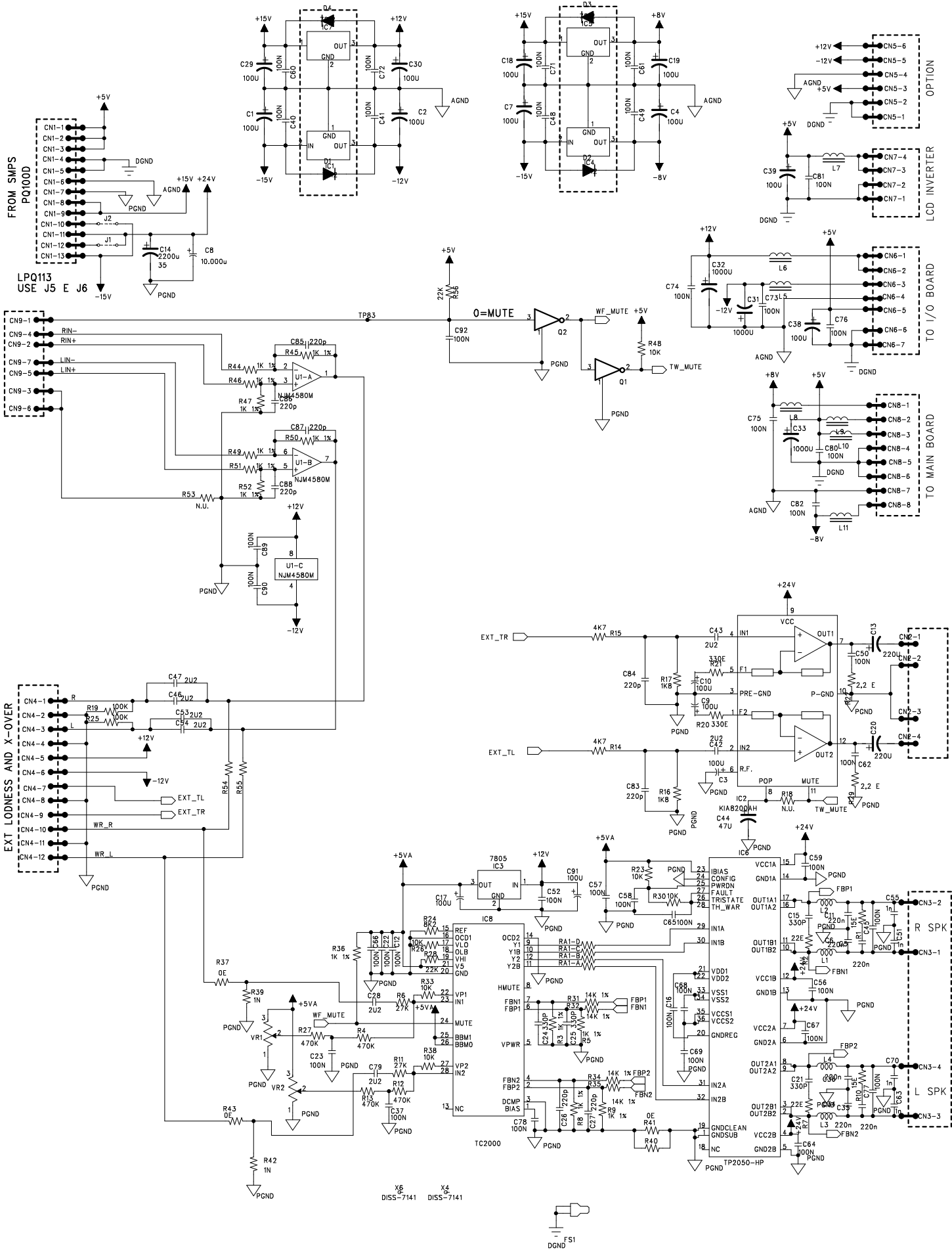




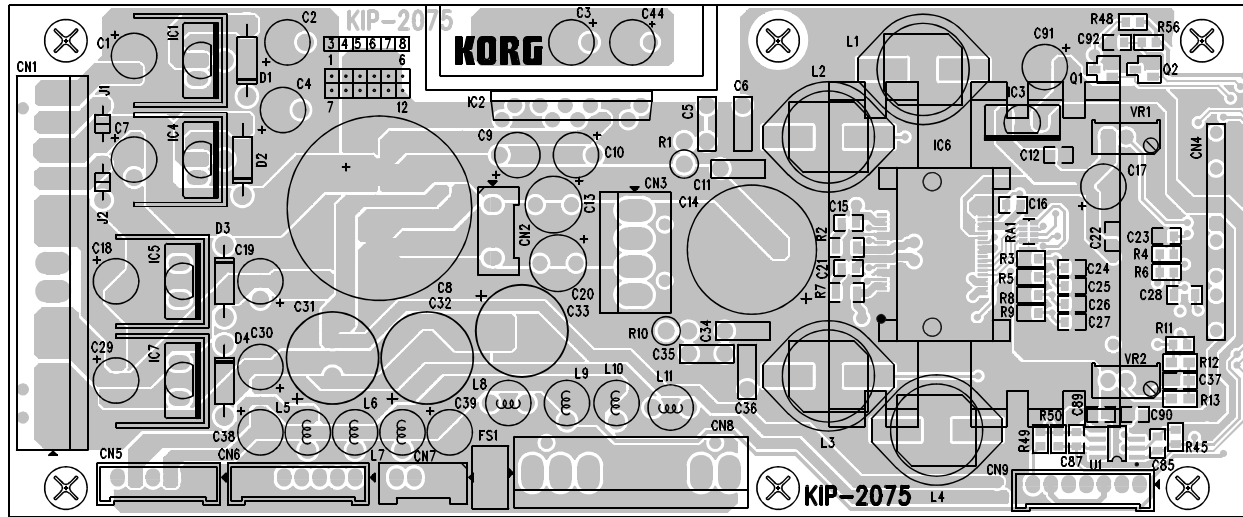
X1

Main filter KIP2074

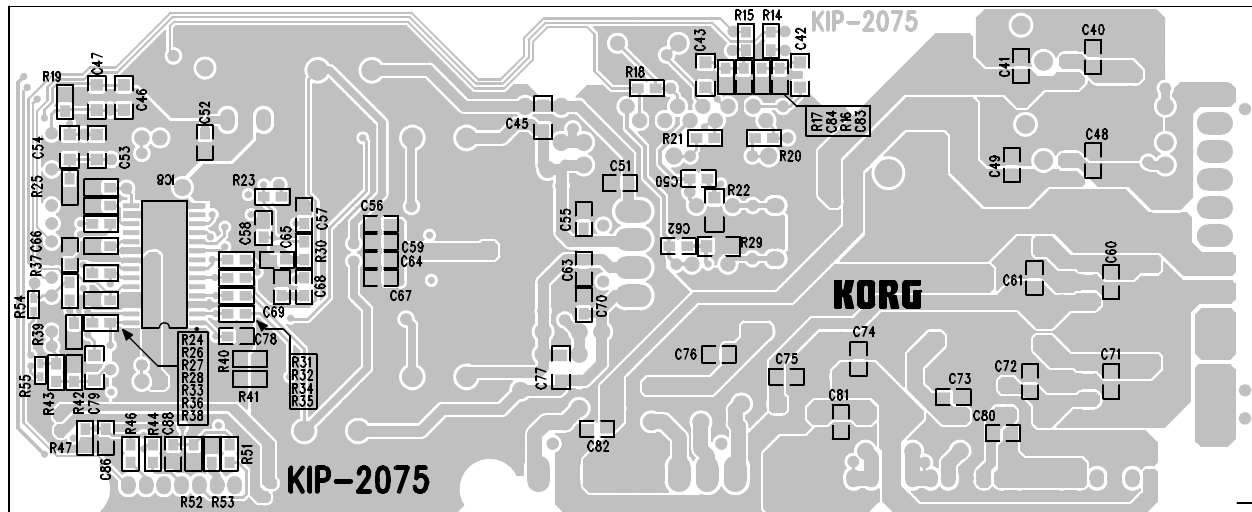
Power amplifier-supply KIP2075

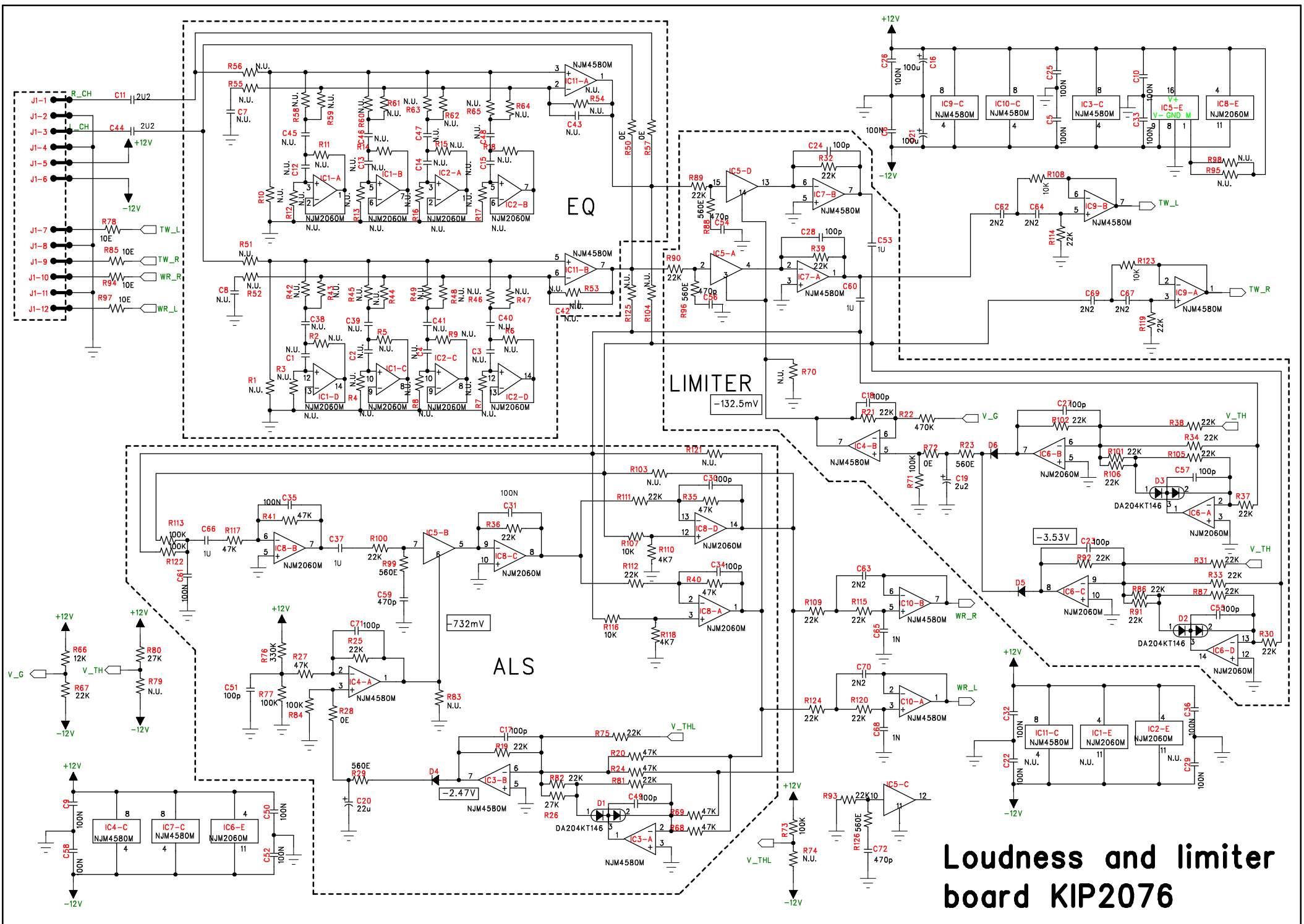


Power amplifier-supply KIP2075 top side



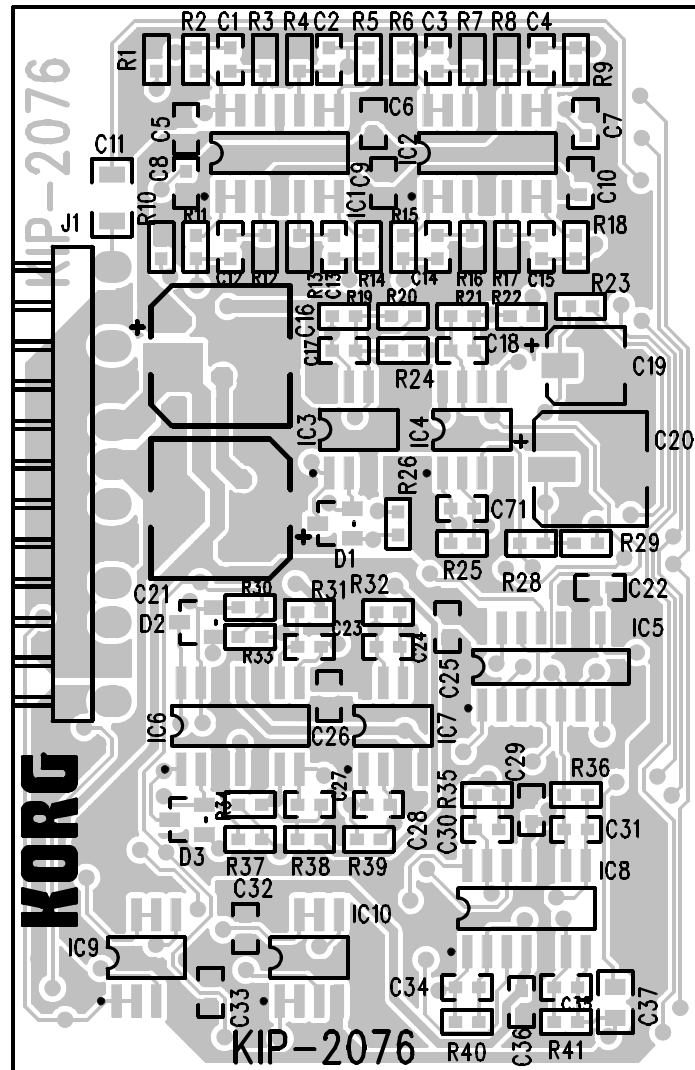
Power amplifier-supply KIP2075 bottom side



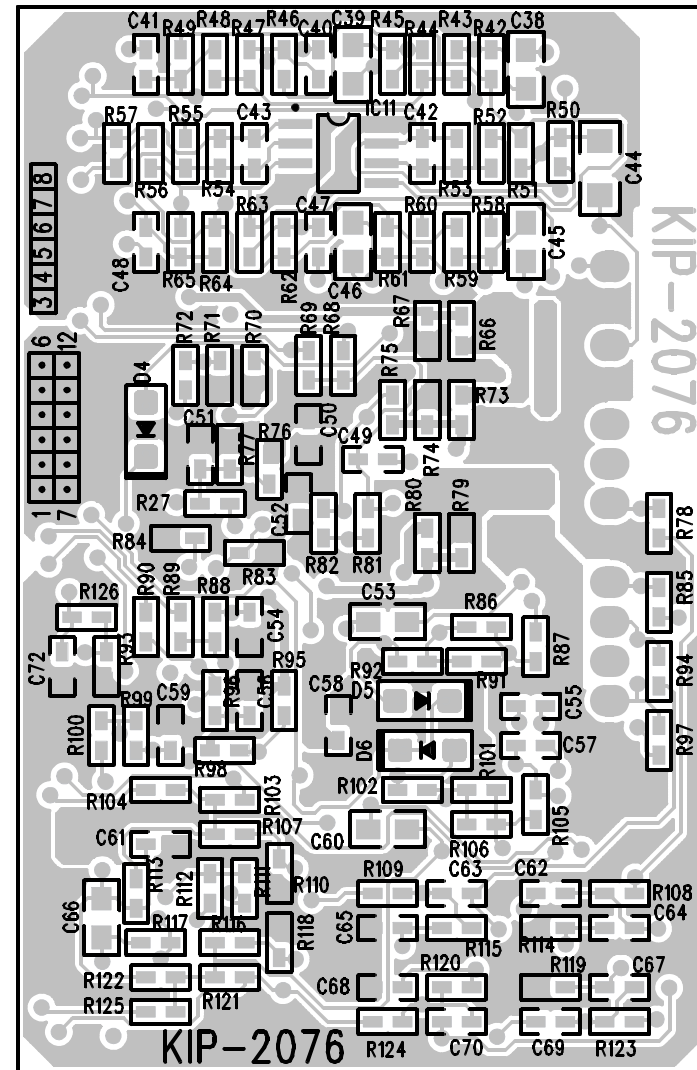


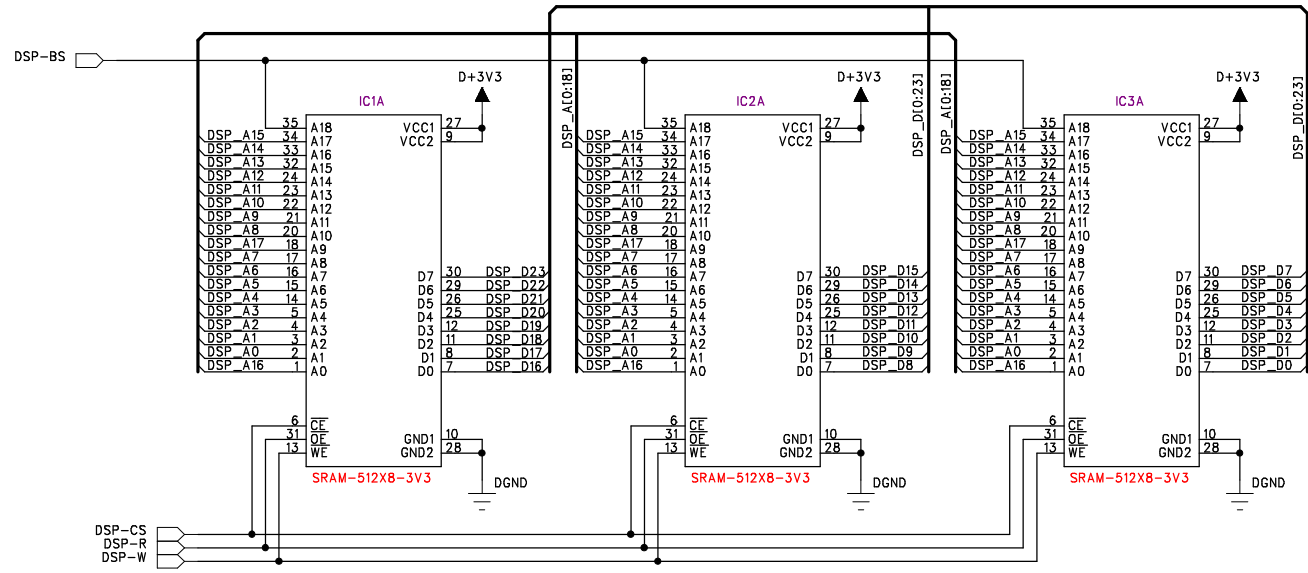
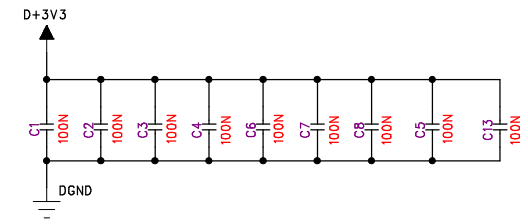
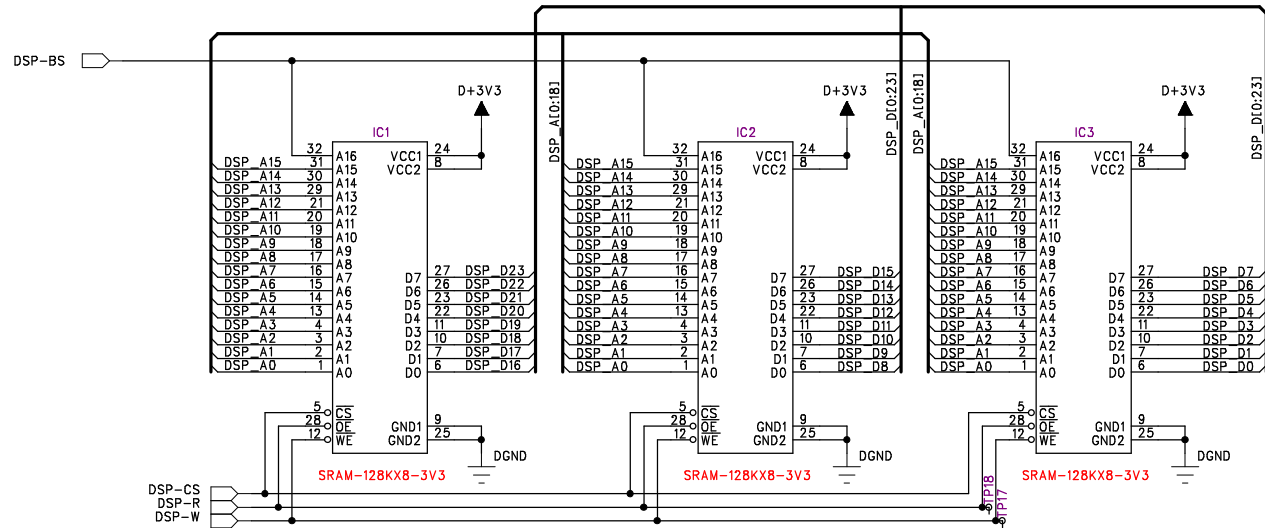
Loudness and limiter board KIP2076

Loudness and limiter board
KIP2076 top side

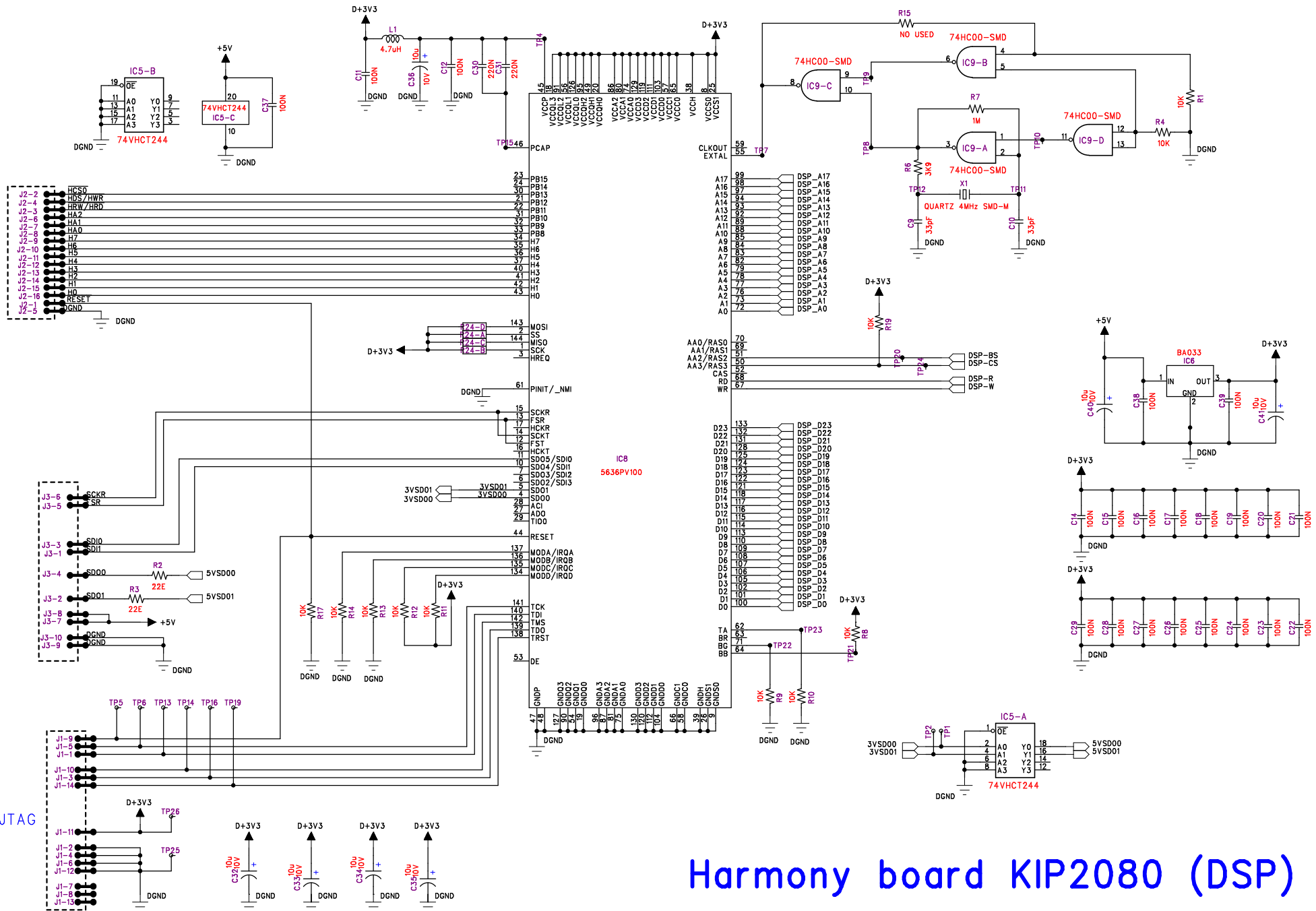


Loudness and limiter board
KIP2076 bottom side



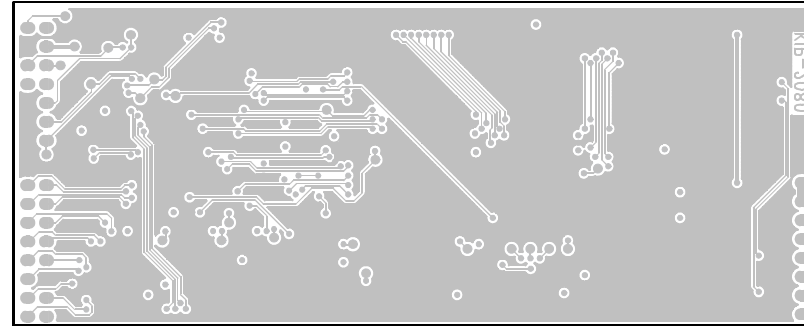


Harmony board KIP2080 (SRAM)

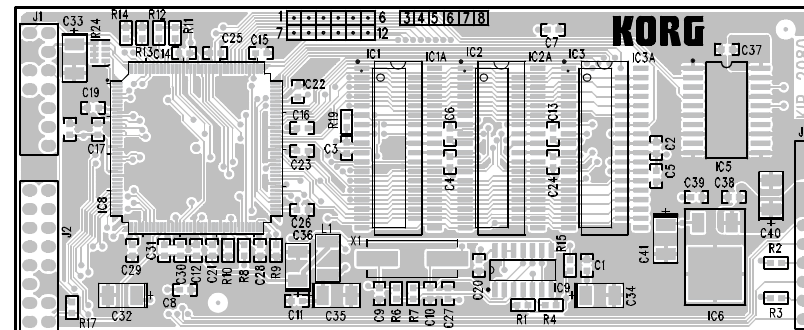


Harmony board KIP2080 (DSP)

Harmony board KIP2080 bottom side

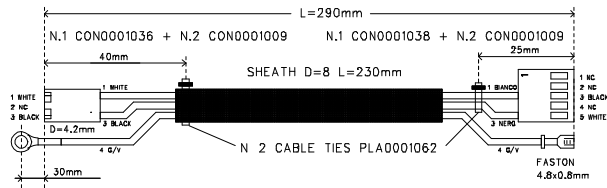


Harmony board KIP2080 top side

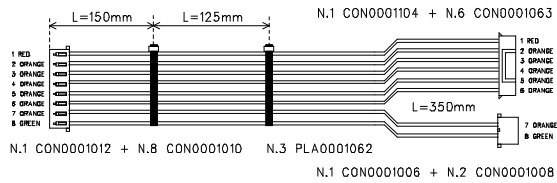


Harnesses 1

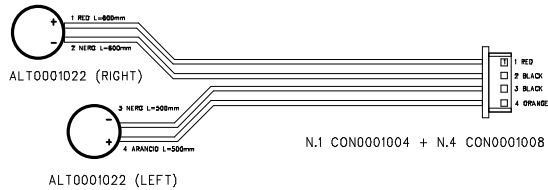
RIL0001263 - PRIMARY SUPPLY



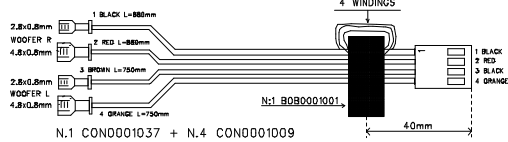
RIL0001279 - VIDEO/MAIN BOARD



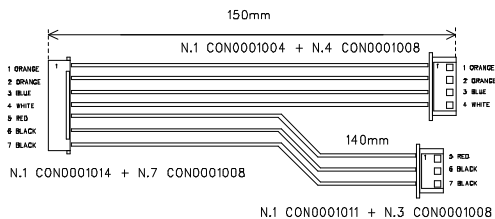
RIL0001288 - TWETER



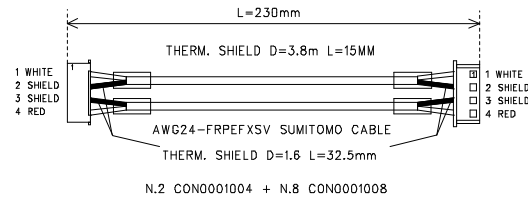
RIL0001289 - WOOFER



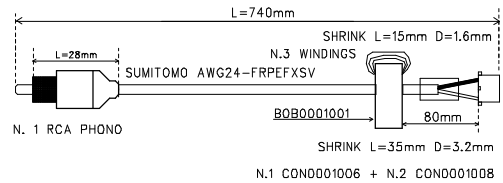
RIL0001268 - OUTPUT BOARD SUPPLY



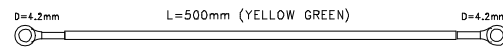
RIL0001278 - AUDIO OUT CDROM



RIL0001283 - VIDEO OUT



RIL0001284 - AWG MAIN BOARD/OUTPUT BOARD



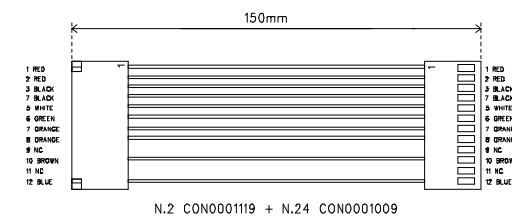
RIL0001285 - AWG FDC-CD-MB-SPS



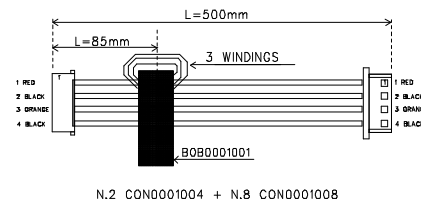
RIL0001286 - AWG UPPER CASE



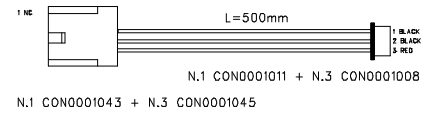
RIL0001266 - PQ100D/AMPLIFIER



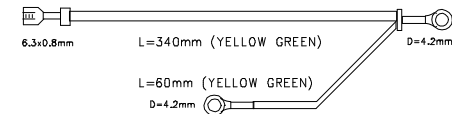
RIL0001265 - HEADPHONE



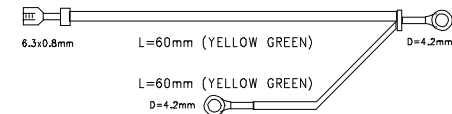
RIL0001264 - FDD/CPU



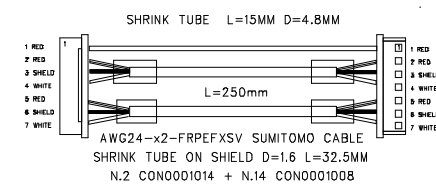
RIL0001292 - AWG LEFT GRID



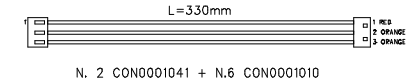
RIL0001293 - AWG RIGHT GRID



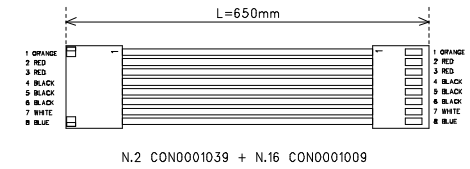
RIL0001287 - AMPLIFIER IN



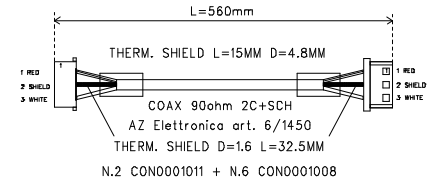
RIL0001262 - ACC. VOLUME



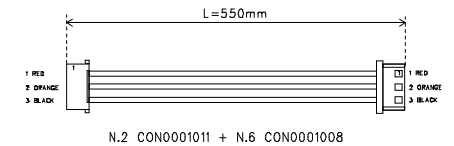
RIL0001267 - MAIN BOARD SUPPLY



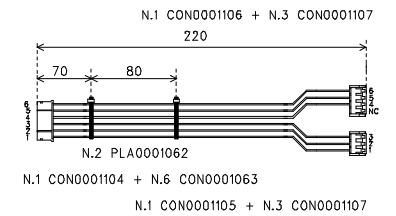
RIL0001269 - USB



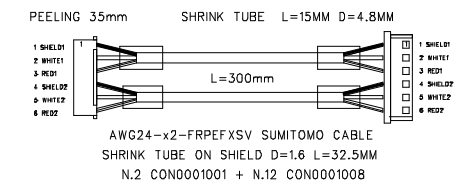
RIL0001277 - AFTERTOUCH



RIL0001281 - JOYSTICK

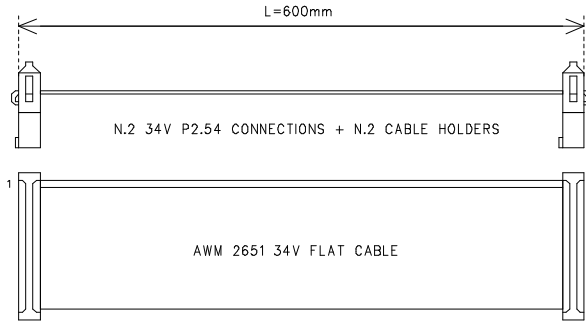


RIL0001182 - MASTER VOLUME

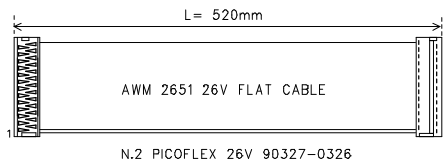


Harnesses 2

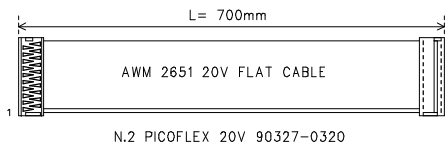
RIL0001270 – FDD/CPU



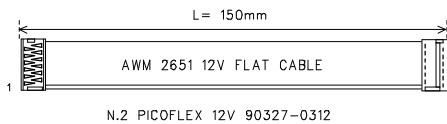
RIL0001271 – AUDIO SIGNAL



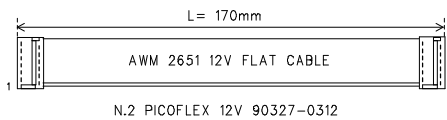
RIL0001272 – DIGITAL SIGNAL



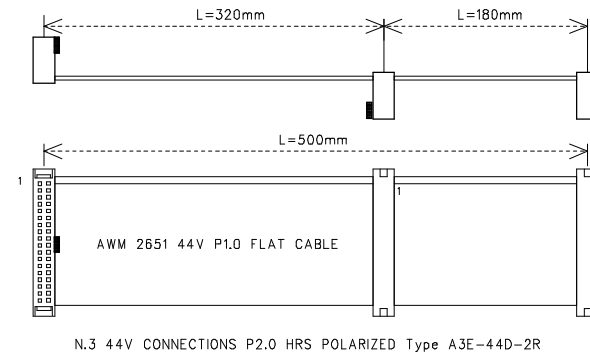
RIL0001195 – DIAL



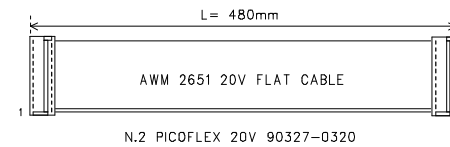
RIL0001196 – LEDS LEFT PANEL



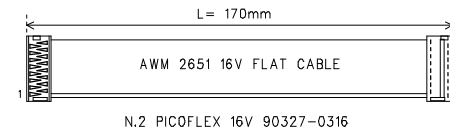
RIL0001205 – H.D./MB/CDROM



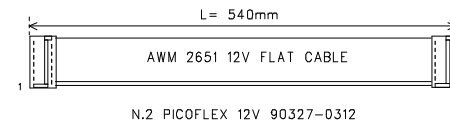
RIL0001274 – SWITCHES RIGHT PANEL



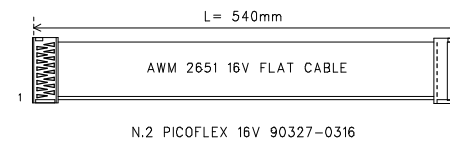
RIL0001276 – CENTRAL PANEL



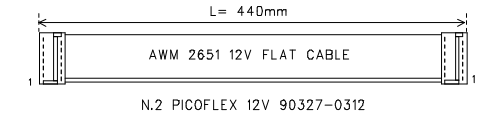
RIL0001290 – LCD



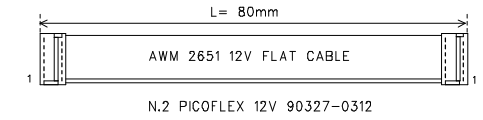
RIL0001291 – NKS



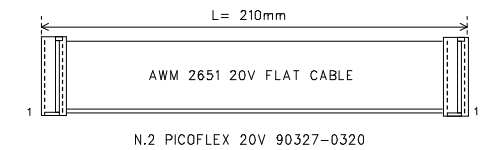
RIL0001273 – LEDS RIGHT PANEL



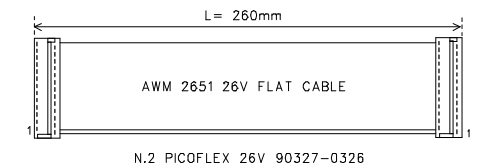
RIL0001202 – LCD PANEL



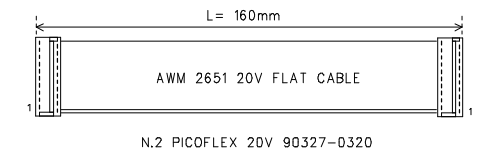
RIL0001303 – SWITCHES LEFT PANEL



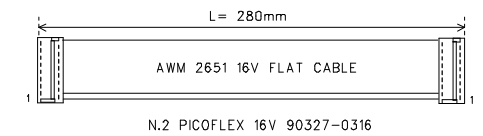
RIL0001282 – MP3



RIL0001275 – 8 SLIDERS PANEL



RIL0001280 – KEYBOARD UPPER/LOWER



Pa1X PART LIST

PART LIST ELECTRIC COMPONENTS

CODE	DESCRIPTION	REFERENCE	Q.TY
GRA0002058	LEFT PANEL BOARD	UC2	1
GRA0002059	RIGHT PANEL BOARD	UC2	1
GRA0002060	CENTRAL PANEL BOARD	UC2	1
GRA0002063	8 SLIDER PANEL BOARD	UC2	1
GRA0002064	MASTER VOLUME	UC2	1
GRA0002065	LCD BOARD	LCD	1
GRA0002067	DIAL	UC2	1
GRA0002068	AFTER TOUCH	UC1	1
GRA0002071	CDRom INTERFACE	CG	1
GRA0002073	HEADPHONE BOARD	LC3	1
GRA0002075	DIGITAL AMPLIFIER	AG	1
GRA0002076	LOUDNESS/EQUALIZATION BOARD	AG	1
GRA0002080	HARMONY BOARD	MBG	1
GRA1002056	OUTPUT BOARD	OG	1
GRA1002057	MAIN BOARD	LC2 MBG	1
GRA1002066	PERIPHERAL INTERFACE	UC1	1
GRA1002074	MAIN FILTER	MFG	1

PART LIST OUTPUT BOARD

CODE	DESCRIPTION	REFERENCE	Q.TY
CIN0001012	CIRC.INT.PC-910K PH.COUPLER	IC1-2	2
CIN0002032	CIRC.INT.SN74AHCT04D	IC3-4	2
CIN0002040	CIRC.INT.NJM4580M OP.AMP.	IC5-6 IC8-13	8
CIN0002071	CIRC.INT.NJM2068E DUAL L. N. OP.AMP.	IC14	1
CIN0003011	CIRC.INT. NMJ4556 AM SMD	U1	1
DIX0005301	ZENER DIODE VZ 4.7 V	D24	1
DIX0006003	SMD DIODE RLS-4148	D1-23	23
INT0001010	2 POSITIONS DOUBLE DEVIATOR	SW1	1
POT0001005	C.L.10KC H 6.5 OR ROTATIVE POTENTIOMETER	VR2	1
POT0001010	C.L.10KB H 6.5 ORIZ. ROTATIVE POTENTIOMETER	VR1	1
TRA0001013	TRANSF. S/PIDIF DIG. AUDIO PE-65612	TR1	1
TRS0001009	TRANS. REGOL.L78L05AC7 TO-92	IC7	1
TRS0002002	TRANSISTOR PNP DTA114EKA SMD	Q4-6	3
TRS0002004	TRANSISTOR NPN 2SD2114KT	Q9-16	8
TRS0002010	J-FET N CHANEL J108 SOT23 (PMBFJ108)	TTR1-6	6
TRS0005001	TRANSISTOR NPN BC 548	Q2	1
TRS0005002	TRANSISTOR PNP BC 558	Q7-8	2
TRS0005009	TRANSISTOR L. N. PNP KTA2400GR	Q1 Q3	2

FV = Full view D = Disassembly UC1 = Upper case 1 UC2 = Upper case 2 UC3 = Upper case 3 UC4 = Upper case 4 LC1 = Lower case 1
 LC2 = Lower case 2 LC3 = Lower case 3 LC4 = Lower case 4 LC5 = Lower case 5 LC6 = Lower case 6 LC7 = Lower case 7 LCD = LCD group
 MFG = Main filter group SG = Switching group AG = Amplifier group CG = CDRom group MBG = Main board group FG = FDD group OG = Output group

Pa1X PART LIST

PART LIST MAIN BOARD

CODE	DESCRIPTION	REFERENCE	Q.TY
CIN0002025	CIRC.INT.GM82C765BS-44 (F.D.C)	U41	1
CIN0002026	CIRC.INT.SN74AHC04D HEX.UND.	U53 U57 U60 U66	4
CIN0002028	CIRC.INT.74LVX4245MTCX TRANSCE	U24-25	2
CIN0002029	CIRC.INT.TC74VHC21FN	U32 U69	2
CIN0002030	CIRC.INT.SN74AHC32D	U68	1
CIN0002031	CIRC.INT.SN74AHC374DW	U30	1
CIN0002032	CIRC.INT.SN74AHCT04D	U64 U70	1
CIN0002033	CIRC.INT SN74AHCT139D	U65	1
CIN0002034	CIRC.INT.SN74AHCT244DW	U3 U14 U19 U34 U39 U45-47 U52	9
CIN0002035	CIRC.INT.SN74AHCT245DW	U48 U51	2
CIN0002036	CIRC.INT.FSC74LVX32M QUA.2-INP	U26	1
CIN0002037	CIRC.INT.TGL96 MB87F1710-PFV-S	U22	1
CIN0002040	CIRC.INT.NJM4580M OP.AMP.	U4-5 U9-12 U15-16 U20	9
CIN0002047	CIRC.INT.HEX INV 74AHC04D	U59	1
CIN0002058	CIRC.INT.BUF. 3 ST.OUT.74VHC244 SMD	U13 U42-44 U49	5
CIN0002059	C.I.A/D CONV. 24 Bit CS5361-KS 192Khz	U63	1
CIN0002060	CIR.INT.MICRO 32b.XCF5307FT90 Mhz	U21	1
CIN0002061	C.I. D/A CONV. 24 Bit CS4396-KS 192Khz	U61-62	2
CIN0002063	C.I.QUAD 2-IN GATE.SN74AHC08 D SMD	U50	1
CIN0002064	C.I.DUAL D-FLIP FLOP.SN74AHC74 D SMD	U54	1
CIN0002065	C.I. LCD CONTROL. S1D13704F00A200	U17	1
CIN0002066	IC. DIGIT CONT. AN. VOL.PGA2311U SMD	U55	1
CIN0002068	C.I.DUAL D- FLIP FLOP.SN74AHCT74 D/T	U31	1
CIN0003020	IC MBCG46183-205(MCM99)KORG ITALY	U29	1
CIN0003036	NAND FLASH TC58128FT TSOP 48 P.	U28	1
CIN0003053	IC EPROM AT27LV010 PLCC32 OTP	U18	1
CIN0003038	IC GM71C18163CJ-6 16M (1MX16) SOJ42	U2	1
CIN0003039	I. MASK ROM MX23L12810TC-10-128M 1	U37	1
CIN0003040	I. MASK ROM MX23L12810TC-10-128M 2	U36	1
CIN0003041	I. MASK ROM MX23L12810TC-10-128M 3	U38	1
CIN0003042	I. MASK ROM MX23L12810TC-10-128M 4	U35	1
CIN0003043	16Mx16MT48LC16M16A2TG-75SOP54	U27	1
CIN0004004	INT.USB PDIUSB12D	U7	1
CIN0004005	RES.GEN.3.3V ETC811SUC	U33	1
CIN0004007	IC SPDIF CS8405A-CS SOP 28	U6	1
CIN0004009	IC SILICON SERIAL NUMBER DS2401Z	U8	1
CIN0004011	IC EMI REDUCTION P2041A-08SR SMD	U58	1
DIX0006003	DIODO SMD RLS-4148	D1-5	4
QUA0006003	QUARZO SMD HCM49 6MHz	X1	1
QUA0006004	QUARZO SMD HCM49 16MHz	X4-5	2
QUA0006005	QUARZO SMD HCM49 24.576MHz	X2	1
QUA0006010	QUARZO SMD HCM49 45MHz	X3	1
TRS0002006	REGOL.+5V 0.5A BA178M05FP	U23	1
TRS0002007	REGOLAT.+3.3V 0.5A BA033FP	U1	1
TRS0002009	REGOLATORE 79L05(SOT89) 100mA SMD	IC1	1

Pa1X PART LIST

PART LIST LEFT PANEL BOARD

CODE	DESCRIPTION	REFERENCE	Q.TY
DIX0005300	1N4148 H. SPEED SW. DIODE	D1-38	38
INT0001008	TACT SWITCH SKHVBE	SW1-38	38
LED0001004	3MM BLUE LED	DL1-15 DL17-28	27
LED0005004	3MM BICOLOR LED red/green	DL16	1

PART LIST RIGHT PANEL BOARD

CODE	DESCRIPTION	REFERENCE	Q.TY
DIX0005300	1N4148 H. SPEED SW. DIODE	D1-37	37
INT0001008	TACT SWITCH SKHVBE	SW1-37	37
LED0001004	3MM BLUE LED	DL2-5 DL8-15	12
LED0005004	3MM BICOLOR LED red/green	DL6	1

PART LIST CENTRAL PANEL BOARD

CODE	DESCRIPTION	REFERENCE	Q.TY
DIX0005300	1N4148 H. SPEED SW. DIODE	D1-10	10
INT0001008	TACT SWITCH SKHVBE	SW1-10	10
LED0001004	3MM BLUE LED	DL1-2	2
POT0001008	AUDIO FEELING 45MM SLIDE POT. 10KB MONO	VR1	1

PART LIST 8 SLIDER PANEL BOARD

CODE	DESCRIPTION	REFERENCE	Q.TY
DIX0005300	1N4148 H. SPEED SW. DIODE	D1	1
INT0001008	TACT SWITCH SKHVBE	SW1	1
LED0001004	3MM BLUE LED	LD1-8	8
POT0001004	LINEAR POTENTIOMETER 10K PARAPOLVERE	VR1-8	8

PART LIST MASTER VOLUME

CODE	DESCRIPTION	REFERENCE	Q.TY
POT0001003	POT. SLIDER 10KBX2 STEREO	VR1	1
POT0001004	LINEAR POTENTIOMETER 10K PARAPOLVERE	VR4	1

PART LIST LCD BOARD

CODE	DESCRIPTION	REFERENCE	Q.TY
DIX0006003	1N4148 SMD DIODE	D1-8	8
INT0001008	TACT SWITCH SKHVBE	SW1-8	8

Pa1X PART LIST

PART LIST PERIPHERAL INTERFACE

CODE	DESCRIPTION	REFERENCE	Q.TY
CIN0002012	I.C.TC74HC138 AFN SMD	IC4-6 IC10	4
CIN0002026	I.C.SN74AHC04D HEX.UND.	IC12	1
CIN0002053	I.C.HEX INV TRIG.74HC14D	IC13	1
CIN0002054	I.C.ANAL.MUX/ DEMUX.74HC4052D	IC1-3	3
CIN0002055	I.C.QUAD.BUFFER 3 OUT.74HC125D	IC9	1
CIN0002056	IC. SCANNER (NKS3.5)HD6433394A35F(S)	IC7	1
QUA0006004	QUARTZ SMD HCM49 16MHz	X1	1
TRA0005001	LCD DC-AC 4.5W 10A INVERTER	INV1	1
TRS0002001	TRANSISTOR NPN DTC114EKA SMD	Q8 Q13 Q15-22	10
TRS0002007	REG.+3.3V 0.5A BA033FP	IC8	1
TRS0002013	TRANSISTOR PNP DTB113EK SMD	Q1-2 Q6-7 Q9-12	8
TRS0005001	TRANSISTOR NPN BC 548	Q3	1
TRS0005004	TRANSISTOR PNP BC 556	Q4-5 Q14	3

PART LIST DIGITAL AMPLIFIER

CODE	DESCRIPTION	REFERENCE	Q.TY
CIN0002040	I.C.NJM4580M OP.AMP.	U1	1
CIN0002050	IC TC2000 PWM STAGE TK2050 2X50W	IC8	1
DIX0005002	1N 4002 DIODE	D1-4	4
FER0001002	CHIP HOLDER 29X12		1
FER0001181	TWEETER HEATSINK		1
FER0001197	AMPLIFIER HEATSINK		1
TRS0001015	AMPL. TP2050 P. STAGE TK2050 2X50W	IC6	1
TRS0002001	TRANSISTOR NPN DTC114EKA SMD	Q1-2	2
TRS0002014	TRANSISTOR KIA8200AH 11WX2 P. AMP	IC2	1
TRS0005005	POS. REG. 1A +12 LM 7812	IC5 IC7	2
TRS0005006	NEG. REG. 1A -12 LM 7912	IC1 IC4	2
TRS0005008	REG. +5V 7805	IC3	1
TRX0005003	TRIMMER V.5K 3296W-1-502	VR1-2	2
VTA0001006	SCREW 3MX14TC		1
VTA0001039	SCREW 2.9X9.5TC SELFTHREADING		2

PART LIST LOUDNESS/EQUALIZATION BOARD

CODE	DESCRIPTION	REFERENCE	Q.TY
CIN0002040	I.C.NJM4580M OP.AMP.	IC3-4 IC7 IC9-10	5
CIN0002051	I.C.NJM2060M QUAD OP.AMP.	IC6 IC8	2
CIN0004012	IC VCA SSM2164S (AD) 16Pin SOP SMD	IC5	1
DIX0006000	SMD DA204KT146 DOUBLE DIODE	D1-3	3
DIX0006003	SMD RLS-4148 DIODE	D4-6	3

Pa1X PART LIST

PART LIST DIAL

CODE	DESCRIPTION	REFERENCE	Q.TY
DIX0005300	1N4148 H. SPEED SW. DIODE	D1-2	2
INT0001008	TACT SWITCH SKHVBE	SW1-2	2
INT0001015	ENCODER	RE1	1

PART LIST HARMONY BOARD

CODE	DESCRIPTION	REFERENCE	Q.TY
CIN0002008	QUAD NAND GATE	IC9	1
CIN0002034	OCTAL BUFFER/LINE DRIVER 3 STATE OUTPUTS	IC5	1
CIN0002067	DSP	IC8	1
CIN0003044	SRAM 512Kx8 3.3V SOJ	IC1A IC2A IC3A	3
QUA0006011	QUARTZ 4MHz SMD-M	X1	1
TRS0002007	+3.3V REG. 1A BA033FP	IC6	1

PART LIST MAIN FILTER

CODE	DESCRIPTION	REFERENCE	Q.TY
INT0001012	SS-160-7-A MAIN SWITCH	SW1	1
INT0001013	FLAT EAR SOCKET	PLUG1	1
PLA0001057	N16B RICHCO NYLON		1
RIL0001217	AWG CABLE		1
VTA0001006	SCREW 3MX14TC		1
VTA0001023	M3 SELFLOCKING NUT		1
VTA0001048	WASHER 3X9X0.8		2

PART LIST AFTERTOUCHE

CODE	DESCRIPTION	REFERENCE	Q.TY
CIN0001004	OP AMP LCM662AIN	U1	1
TRX0005001	TRIMMER HOR. 3K3	VR1	1
TRX0005002	TRIMMER HOR. 470K	VR2	1

Pa1X PART LIST

PART LIST HARNESSES

CODE	DESCRIPTION	REFERENCE	Q.TY
RIL0001182	MASTER VOLUME	D OG	1
RIL0001195	DIAL	UC2	1
RIL0001196	LED LEFT PANEL BOARD	UC1 UC2	1
RIL0001202	LCD	UC1 LCD	1
RIL0001205	HD/MB/CDRom	LC2 MBG	1
RIL0001262	ACC. VOLUME	UC2	1
RIL0001263	PRIMARY SUPPLY	MFG	1
RIL0001264	FDD/CPU SUPPLY	LC2 FG	1
RIL0001265	HEADPHONE	LC3 LC4 OG	1
RIL0001266	PQ 100 D/AMPLIFIER	LC5	1
RIL0001267	M.B. SUPPLY	LC2	1
RIL0001268	OUTPUT BOARD SUPPLY	LC4 OG	1
RIL0001269	USB	LC2 LC4 OG	1
RIL0001270	FDD/CPU	FG	1
RIL0001271	AUDIO SIGNAL	LC2 LC4 OG	1
RIL0001272	DIGITALI SIGNAL	LC2 LC4	1
RIL0001273	LED RIGHT PANEL	UC1 UC2	1
RIL0001274	SWITCHES RIGHT PANEL	UC1 UC2	1
RIL0001275	8 SLIDER	UC1 UC2	1
RIL0001276	CENTRAL PANEL	UC1 UC2	1
RIL0001277	AFTER TOUCH	UC1	1
RIL0001278	CDRom AUDIO OUT	LC2	1
RIL0001279	VIDEO/MB.	MBG	1
RIL0001280	KEYBOARD UPPER-LOWER	UC1	2
RIL0001281	JOYSTICK	UC2	1
RIL0001282	MP3	MBG	1
RIL0001283	VIDEO OUT	LC4 OG	1
RIL0001284	CPU/PRESE AWG	LC1 LC2 LC4	2
RIL0001286	UPPER CASE AWG	D LC1	1
RIL0001287	AMPLIFIER INPUT	LC4 OG	1
RIL0001288	TWEETER	LC5 LC6	1
RIL0001289	WOOFER	LC5 LC6	1
RIL0001290	MB/LCD/REGULATION BOARD	D LC2	1
RIL0001291	MB/NKS/REGULATION BOARD	D LC2	1
RIL0001292	LEFT GRID AWG	UC4	1
RIL0001293	RIGHT GRID AWG	UC4	1
RIL0001303	SWITCHES LEFT PANEL	UC1 UC2	1

FV = Full view D = Disassembly UC1 = Upper case 1 UC2 = Upper case 2 UC3 = Upper case 3 UC4 = Upper case 4 LC1 = Lower case 1
 LC2 = Lower case 2 LC3 = Lower case 3 LC4 = Lower case 4 LC5 = Lower case 5 LC6 = Lower case 6 LC7 = Lower case 7 LCD = LCD group
 MFG = Main filter group SG = Switching group AG = Amplifier group CG = CDRom group MBG = Main board group FG = FDD group OG = Output group

Pa1X PART LIST

PART LIST SCREWS

CODE	DESCRIPTION	REFERENCE	Q.TY
VTA0001004	SCREW 4X15 TFR PR	LC6	8
VTA0001005	SCREW M3X10 TC	OG	1
VTA0001006	SCREW 3MX14 TC	AG	2
VTA0001010	SCREW 3X16 TFR HILO	D UC1 LC3	8
VTA0001011	GROVER Ø 4	LC1 LC2 LC4 MFG	6
VTA0001015	3M NUT	OG	1
VTA0001016	SCREW 3X20 TC PR	UC1	4
VTA0001023	M3 SELFLOCKING NUT	UC4 MFG AG	8
VTA0001028	M4 NUT	MFG	1
VTA0001031	SCREW 3MX6 TC	MFG AG MBG FG OG	44
VTA0001032	SCREW 3MX8 TC	SG	4
VTA0001036	SCREW 3.5X16 TC	D	8
VTA0001037	SCREW 2.9X6.5TC SELFTHREADING SP	D UC1 LC1 LC5 OG	44
VTA0001038	SCREW 3X8 TC PR SP	UC1 UC2 LC2 LC3 LC5	76
VTA0001039	SCREW 2.9X9.5 TC SEKFTHREADING SP	D	8
VTA0001045	M4 SELFLOCKING NUT	LC1 MFG	4
VTA0001048	WASHER 3X9X0.8	D UC4 LC1 MFG AG	18
VTA0001049	SCREW 2.2X6.5 TC	LCD	7
VTA0001050	SCREW M4X8 TC SELFTAPPING	LC2 LC4 LC5	4
VTA0001051	SCREW 3X13 TC PR	D UC1 UC4 LC3 LC6	21
VTA0001060	SCREW 2.9X9.5 TSP	D	2
VTA0001067	SCREW 3.5X16 TC AGG-BZ	D UC1 LC1 LC4 LC5 LC7	71
VTA0001084	SCREW 3.5X9.5 TC SELFTHREADING SP	UC4 LC4	5
VTA0001085	SCREW M2X4 TC	CG	3
VTA0001089	SCREW M2X2.5 TC		6
VTA0001096	SPACER SLEEVE M3X15	OG	1

Pa1X PART LIST

PART LIST METAL COMPONENTS

CODE	DESCRIPTION	REFERENCE	Q.TY
FER0001164	CDRom SUPPORT	LG	1
FER0001170	MUSIC REST		1
FER0001177	MAIN FILTER PROTECTION	LC1	1
FER0001178	POWER SUPPLY SUPPORT	SG	1
FER0001179	POWER SUPPLY PROTECTION	LC5	1
FER0001183	DRIVE FIXING PROFILE	FG	2
FER0001184	OUTPUT BOARD SUPPORT	OG	1
FER0001185	MAIN BOARD SUPPORT	MBG	1
FER0001186	MAIN BOARD SHIELD	LC1	1
FER0001188	HDD SUPPORT		2
FER0001189	RIGHT SPEAKER GRID	UC4	1
FER0001190	LEFT SPEAKER GRID	UC4	1
FER0001191	KEYBOARD REAR SUPPORT	UC1	1
FER0001192	KEYBOARD FRONT SUPPORT	UC1	1
FER0001207	AMPLIFIER SUPPORT	AG	1
FER0001208	MUSIC REST FIXING PROFILE	UC4	2
FER0001209	UPPER CASE FIXING PROFILE	UC1	4
FER0001210	MAIN SWITCH SUPPORT	MFG	1
FER0001214	AWG PLATE	UC4	1
FER0001215	CDRom LOWER SUPPORT	LC3	1
FER0001216	FIXING PROFILE	D UC1	1
FER0001217	PERIPHERAL INTERFACE SUPPORT	UC1	1
FER0002054	OPTIONS COVER PANEL	D	1
FER0002056	CDRom CLOSED COVER PANEL	D	1
FER0002057	CDRom OPENED COVER PANEL		1
FER0002058	OUTPUT BOARD EXTERNAL SUPPORT	OG	1
FER0002059	MAIN FILTER SUPPORT	MFG	1

FV = Full view **D** = Disassembly **UC1** = Upper case 1 **UC2** = Upper case 2 **UC3** = Upper case 3 **UC4** = Upper case 4 **LC1** = Lower case 1
LC2 = Lower case 2 **LC3** = Lower case 3 **LC4** = Lower case 4 **LC5** = Lower case 5 **LC6** = Lower case 6 **LC7** = Lower case 7 **LCD** = LCD group
MFG = Main filter group **SG** = Switching group **AG** = Amplifier group **CG** = CDRom group **MBG** = Main board group **FG** = FDD group **OG** = Output group

Pa1X PART LIST

PART LIST PLASTIC COMPONENTS

CODE	DESCRIPTION	REFERENCE	Q.TY
PLA0001046	SMALL CABLE TIE	UC1 UC2 LC1 LC3 LC4 LC5 LC6 MBG OG	18
PLA0001046	SMALL CABLE TIE	UC1 (USA)	1
PLA0001047	BIG CABLE TIE	MBG	1
PLA0001062	FCV-100 PAN TY CABLE TIE	MFG	2
PLA0001094	CST 6mm SRS4-04-01 SPACER SLEEVE	UC1	4
PLA0001130	CFCC-8-04A FLAT CABLE HOLDER	MBG	3
PLA0001132	DISPLAY BUTTONS	LCD	1
PLA0001133	DIAL SUPPORT	UC3	1
PLA0001134	DIAL LEFT BUTTON	UC3	1
PLA0001135	DIAL RIGHT BUTTON	UC3	1
PLA0001136	DIAL KNOB	FV	1
PLA0001139	17mm LED BUTTON	UC3	22
PLA0001140	17mm BUTTON	UC3	32
PLA0001141	19mm LED BUTTON	UC3	15
PLA0001142	19mm BUTTON	UC3	16
PLA0001144	LED PROTECTION	UC3	13
PLA0001146	SLIDER KNOB	FV	11
PLA0001148	19mm RED LED BUTTON	UC3	1
PLA0001157	MAIN SWITCH BUTTON	MFG	1
PLA0001159	RIGHT SPEAKER BOX	LC7	1
PLA0001160	LEFT SPEAKER BOX	LC7	1
PLA0001169	NYLON F/F HTSN-M3-10-06-1 HEXAGONAL SPACER	SG	1
PLA0001170	M3 NSE-34812-M3-06 NYLON SCREW	SG	2
PLA0001171	O/C PGSB-1013A CABLE PROTECTION	MFG LC5	2
PLA0002054	LOWER CASE	LC7	1
PLA0002055	UPPER CASE	UC4	1
PLA0002056	DISPLAY PANEL	LCD	1

Pa1X PART LIST

OTHER COMPONENTS

CODE	DESCRIPTION	REFERENCE	Q.TY
ALT0001020	WOOFER 129.25/280 =Z 6 EC350	LC6	2
BOB0001001	FERRITE RT25-150-120-K5B	LC2	1
BOB0001003	FERRITE MOD.RT145-103-080	UC1 (USA)	1
FDD0001001	FLOPPY D.D. LOW NOISE	FG	1
FDD0001017	SIMM EDO4326 16Mb 5Volt	MBG	1
FDD0001018	TOUCH SCREEN GRAPHIC DISPLAY	UC1 LCD	1
FDD0001019	JOYSTICK SILVER (TRITON SERIES)	UC2	1
TAS0001021	TP9 AFTER TOUCH WEIGHTED KEYBOARD	UC1	1
TRA0004004	SWITCHING PT100	SG	1
FEL0001028	ART389 3M 8mmX50MT ADHESIVE TAPE	FG	0.30
FEL0001029	ART.389 3M 18mmx50 ADHESIVE TAPE	LCD	0.10
FEL0001030	BUMPON 3M ART.SJ5023	D	5
FEL0001036	2X16X40 ADHESIVE FELT	MBG OG	2
FEL0001040	5X10X30 ADHESIVE RUBBER	D LC7	2
FEL0001056	3M 969 12mmx33M DOUBLE SIDE ADHESIVE TAPE	UC4 LC6	2.50
FEL0001059	HEADPHONE ADHESIVE LABEL	D	1
FEL0001078	30x13x1 ADHESIVE SPIK	LC6	2
FEL0001087	135X5X1 ADHESIVE SPIK	LC7	2
FEL0001089	RIGHT POWDER FILTER	UC4	1
FEL0001090	LEFT POWDER FILTER	UC4	1
FEL0001097	EDILFIBER 600mg/mq 250X250x50	LC6	2
FEL0001100	SAFETY CHECK LABEL	D	1
FEL0001101	VIF3 LABEL	D	1
FEL0001103	3M EC5313 2mmx7mmm X15MT MASTIC	UC2 LC1 LC2 LC3 LC4	1.15
FEL0001104	RIGHT PANEL ANTI-VIBRATIONS FELT	UC3	1
FEL0001105	LEFT PANEL ANTI-VIBRATIONS FELT	UC3	1
FEL0001106	CENTRAL PANEL ANTI-VIBRATIONS FELT	UC3	1
FEL0001107	SLIDER PANEL ANTI-VIBRATIONS FELT	UC3	1
FEL0001109	FDD-CDR-CPU MYLARD SHIELD	LC6	1
FEL0001110	FILTER-SUPPLY-INTERFACE-CPU MYLARD SHIELD	D LC6	1
FEL0001111	OUTPUT BOARD-AMPLIFIER MYLARD SHIELD	AG	1
FEL0001112	CPU-FDD-OUTPUT BOARD MYLARD SHIELD	FG	1
FEL0002053	SERIAL NUMBER LABEL	D	1

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